CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD CENTRAL VALLEY REGION

11020 Sun Center Drive #200, Rancho Cordova, California 95670-6114 Phone (916) 464-3291 • FAX (916) 464-4645 http://www.waterboards.ca.gov/centralvalley

> ORDER NO. R5-2007-0078 NPDES NO. CA0084824

WASTE DISCHARGE REQUIREMENTS FOR THE NORTH YUBA WATER DISTRICT FORBESTOWN WATER TREATMENT PLANT BUTTE COUNTY

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 1. Discharger Information

Discharger	North Yuba Water District			
Name of Facility	orbestown Water Treatment Plant			
Facility Address	118 Buckeye Drive			
	Forbestown, CA 95941			
	Butte County			

The U.S. Environmental Protection Agency (USEPA) and the Regional Water Quality Control Board have classified this discharge as a **minor** discharge.

The discharge by the North Yuba Water District from the discharge points identified below is subject to waste discharge requirements as set forth in this Order:

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Filter backwash	39°, 30', 54" N	121º, 16', 09" W	Unnamed tributary of New York Creek
002	Filter backwash (combined w/ raw water)	39°, 30', 54" N	121°, 16', 07" W	Unnamed tributary of New York Creek (RSW 002)

Table 3. Administrative Information

This Order was adopted by the Regional Water Quality Control Board on:	June 22, 2007
This Order shall become effective on:	August 11, 2007
This Order shall expire on:	August 1, 2012
The Discharger shall file a Report of Waste Discharge in accordance with title 23, California Code of Regulations, as application for issuance of new waste discharge requirements no later than:	180 days prior to the Order expiration date

IT IS HEREBY ORDERED, that Order No. R5-2002-0109 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the federal Clean Water Act (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on June 22, 2007.

		PAMELA	C. CF	REEDON,	Executive	Officer
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I. FACILITY INFORMATION

The following Discharger is subject to waste discharge requirements as set forth in this Order:

Table 4. Facility Information

Discharger	North Yuba Water District
Name of Facility	Forbestown Water Treatment Plant
	118 Buckeye Drive
Facility Address	Forbestown, CA 95941
	Butte County
Facility Contact, Title,	William Suppa, General Manager, (530) 675-2567
and Phone	Eric Manley, Treatment Plant Operator, (530) 675-2971
Mailing Address	P.O. Box 299, Brownsville, CA 95919
Type of Facility	Water Treatment Plant
Facility Design Flow	0.070 mgd

II. FINDINGS

The California Regional Water Quality Control Board, Central Valley Region (hereinafter Regional Water Board), finds:

A. Background. North Yuba Water District (hereinafter Discharger) is currently discharging pursuant to Order No. R5-2002-0109 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0084824. The Discharger submitted a Report of Waste Discharge, dated 21 October 2006, and applied for a NPDES permit renewal to discharge up to 0.070 million gallons daily (mgd) of treated wastewater from the Forbestown Water Treatment Plant, hereinafter Facility. The application was deemed complete on 15 December 2006. On 9 April 2007, the Discharger submitted a notice of name change to formally change their name from Yuba County Water District to North Yuba Water District.

For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

B. Facility Description. The Discharger owns and operates a water treatment plant. Raw water is siphoned for treatment either directly from the Forbestown Ditch or from the facility's 30.9 acre-feet capacity raw water storage reservoir that is supplied by the Forbestown Ditch. The treatment system consists of prechlorination, coagulation, clarification, filtration, and post-chlorination of the finished water. The Facility's wastewater design flow is 0.070 million gallons daily (mgd). Filter backwash is discharged to one of two settling ponds. The supernatant from the settling ponds discharges into the raw water reservoir (Discharge Point 001); the raw water reservoir discharges a mixture of filter backwash and raw water to an unnamed tributary of the New York Creek (Discharge Point 002), a water of the United States, and a tributary to Dry Creek and the Yuba River (Englebright Dam to Feather River) within the Yuba River

Hydrologic Unit, Mildred Lake Hydrologic Subarea (No. 517.13). Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

- C. Legal Authorities. This Order is issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the California Water Code (commencing with section 13370). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the Water Code (commencing with section 13260).
- D. Background and Rationale for Requirements. The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and other available information. The Fact Sheet (Attachment F), which contains background information and rationale for Order requirements, is hereby incorporated into this Order and constitutes part of the Findings for this Order. Attachments A through E are also incorporated into this Order.
- **E. California Environmental Quality Act (CEQA).** Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100-21177.
- F. Technology-based Effluent Limitations. Section 301(b) of the CWA and implementing USEPA permit regulations at section 122.44, title 40 of the Code of Federal Regulations (CFR)¹ require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Best Professional Judgment (BPJ) in accordance with Part 125, section 125.3. A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment F).
- **G. Water Quality-based Effluent Limitations.** Section 301(b) of the CWA and section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards. The Regional Water Board has considered the factors listed in CWC Section 13241 in establishing these requirements.

Section 122.44(d)(1)(i) mandates that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, water quality-based effluent limitations (WQBELs) must be established using:

All further statutory references are to title 40 of the Code of Federal Regulations unless otherwise indicated.

- (1) USEPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed State criterion or policy interpreting the State's narrative criterion, supplemented with other relevant information, as provided in 40 CFR section 122.44(d)(1)(vi).
- H. Water Quality Control Plans. The Regional Water Board adopted a Water Quality Control Plan, Fourth Edition (Revised September 2004), for the Sacramento and San Joaquin River Basins (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. The Basin Plan at page II-2.00 states that the "...beneficial uses of any specifically identified water body generally apply to its tributary streams." The Basin Plan does not specifically identify beneficial uses for the unnamed tributary of New York Creek, but does identify present and potential uses for the Yuba River (Englebright Dam to Feather River), to which New York Creek, via Dry Creek, is tributary. The beneficial uses of the Yuba River (Englebright Dam to Feather River) are as follows: agricultural supply, including stock watering; hydropower generation; water contact recreation, including canoeing and rafting; non-contact water recreation; warm freshwater habitat; cold freshwater habitat; warm migration of aquatic organisms; cold migration of aquatic organisms; warm spawning, reproduction, and/or early development; cold spawning, reproduction, and /or early development; and wildlife habitat.

In addition, the Basin Plan implements State Water Resources Control Board (State Water Board) Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. The Basin Plan does not designate municipal and domestic supply as existing or potential uses of the Yuba River (Englebright Dam to Feather River). However, based on Resolution No. 88-63, the unnamed tributary to New York Creek, New York Creek, and Dry Creek, which are tributaries of the Yuba River, do have municipal and domestic supply beneficial uses. Thus, as discussed in detail in the Fact Sheet, beneficial uses applicable to the unnamed tributary to New York Creek are as follows:

Table 5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Unnamed tributary to New York Creek, a tributary to Dry Creek, which is tributary to Yuba River (Englebright Dam to Feather River).	Existing: Municipal and domestic supply (MUN), agricultural supply (AGR), including stock watering and irrigation; hydropower generation (POW); contact (REC-1) and non-contact (REC-2) water recreation; warm freshwater habitat (WARM) and cold freshwater habitat (COLD); warm migration (WARM) and cold migration (COLD); warm spawning (WARM) and cold spawning (COLD); and wildlife habitat (WILD).

002	Unnamed tributary to New York Creek, a tributary to Dry Creek, which is tributary to Yuba River (Englebright Dam to Feather River).	Existing: Municipal and domestic supply (MUN), agricultural supply (AGR), including stock watering and irrigation; hydropower generation (POW); contact (REC-1) and non-contact (REC-2) water recreation; warm freshwater habitat (WARM) and cold freshwater habitat (COLD); warm migration (WARM) and cold migration (COLD); warm spawning (WARM) and cold spawning (COLD); and wildlife habitat (WILD).
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Requirements of this Order implement the Basin Plan.

- I. National Toxics Rule (NTR) and California Toxics Rule (CTR). USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain water quality criteria for priority pollutants.
- J. State Implementation Policy. On March 2, 2000, the State Water Board adopted the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP). The SIP became effective on April 28, 2000 with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000 with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005 that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.
- K. Compliance Schedules and Interim Requirements. In general, an NPDES permit must include final effluent limitations that are consistent with Clean Water Act section 301 and with 40 CFR 122.44(d). There are exceptions to this general rule. The State Water Board has concluded that where the Regional Water Board's Basin Plan allows for schedules of compliance and the Regional Water Board is newly interpreting a narrative standard, it may include schedules of compliance in the permit to meet effluent limits that implement a narrative standard. See In the Matter of Waste Discharge Requirements for Avon Refinery (State Board Order WQ 2001-06 at pp. 53-55). See also Communities for a Better Environment et al. v. State Water Resources Control Board, 34 Cal.Rptr.3d 396, 410 (2005). The Basin Plan for the Sacramento and San Joaquin Rivers includes a provision that authorizes the use of compliance schedules in NPDES permits for water quality objectives that are adopted after the date of adoption of the Basin Plan, which was September 25, 1995 (See Basin Plan at page IV-16). Consistent with the State Water Board's Order in the CBE matter, the Regional Water Board has the discretion to include compliance schedules in NPDES permits when it is

including an effluent limitation that is a "new interpretation" of a narrative water quality objective. This conclusion is also consistent with the USEPA policies and administrative decisions. See, e.g., Whole Effluent Toxicity (WET) Control Policy. The Regional Water Board, however, is not required to include a schedule of compliance, but may issue a Time Schedule Order pursuant to Water Code section 13300 or a Cease and Desist Order pursuant to Water Code section 13301 where it finds that the discharger is violating or threatening to violate the permit. The Regional Water Board will consider the merits of each case in determining whether it is appropriate to include a compliance schedule in a permit, and, consistent with the Basin Plan, should consider feasibility of achieving compliance, and must impose a schedule that is as short as practicable to achieve compliance with the objectives, criteria, or effluent limit based on the objective or criteria.

For CTR constituents, Section 2.1 of the SIP provides that, based on a Discharger's request and demonstration that it is infeasible for an existing Discharger to achieve immediate compliance with an effluent limitation derived from a CTR criterion, compliance schedules may be allowed in an NPDES permit. Unless an exception has been granted under section 5.3 of the SIP, a compliance schedule may not exceed 5 years from the date that the permit is issued or reissued, nor may it extend beyond 10 years from the effective date of the SIP (or May 18, 2010) to establish and comply with CTR criterion-based effluent limitations. Where a compliance schedule for a final effluent limitation that exceeds 1 year, the Order must include interim numeric limitations for that constituent or parameter. Where allowed by the Basin Plan, compliance schedules and interim effluent limitations or discharge specifications may also be granted to allow time to implement a new or revised water quality objective. This Order does not include compliance schedules and interim effluent limitations. A detailed discussion of the basis for the discharge specifications is included in the Fact Sheet.

- L. Alaska Rule. On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards (WQS) become effective for CWA purposes. (40 C.F.R. § 131.21; 65 Fed. Reg. 24641 (April 27, 2000).) Under the revised regulation (also known as the Alaska rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000 may be used for CWA purposes, whether or not approved by USEPA.
- M. Stringency of Requirements for Individual Pollutants. This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based effluent limitations consist of restrictions on settleable solids and total suspended solids (TSS). The water quality-based effluent limitations consist of restrictions on turbidity, pH, and residual chlorine. This Order's technology-based pollutant restrictions are based on BPJ. The rationale for including these limitations is explained in the Fact Sheet. In addition, the Regional Water Board has considered the factors in Water Code section 13241 in establishing these requirements.

Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR section 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was approved by USEPA on May 1, 2001. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the [Clean Water] Act pursuant to 40 CFR section 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the CWA and the applicable water quality standards for purposes of the CWA.

- N. Antidegradation Policy. Section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 is consistent with the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. As discussed in detail in the Fact Sheet the permitted discharge is consistent with the antidegradation provision of section 131.12 and State Water Board Resolution No. 68-16.
- O. Anti-Backsliding Requirements. Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.
- P. Monitoring and Reporting. Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.
- **Q. Standard and Special Provisions.** Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D. The discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42. The Regional Water

Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet.

- R. Provisions and Requirements Implementing State Law. The provisions/requirements in subsections IV.B, IV.C, V.B, and VI.C. of this Order are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.
- S. Notification of Interested Parties. The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet of this Order.
- **T. Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet of this Order.

III. DISCHARGE PROHIBITIONS

- A. Discharge of wastewater at a location or in a manner different from that described in the Findings is prohibited.
- B. The by-pass or overflow of wastes to surface waters is prohibited, except as allowed by Federal Standard Provisions I.G. and I.H. (Attachment D).
- C. Neither the discharge nor its treatment shall create a nuisance as defined in Section 13050 of the California Water Code.
- D. The Discharger shall not allow pollutant-free wastewater to be discharged into the collection, treatment, and disposal system in amounts that significantly diminish the system's capability to comply with this Order. Pollutant-free wastewater means rainfall, groundwater, cooling waters, and condensates that are essentially free of pollutants.
- E. The discharge of waste classified as "hazardous" as defined in Sections 2521 (a) of Title 23, CCR, Section 13173 of the California Water Code, is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations

1. Final Effluent Limitations – Discharge Point 001

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the attached MRP (Attachment E):

a. The Discharger shall maintain compliance with the effluent limitations specified in Table 6:

Table 6. Effluent Limitations – Discharge Point 001

		Effluent Limitations				
Parameter	Units	Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Flow	mgd	0.070				
Settleable Solids	mL/L-hr	0.1	0.2			
Total Suspended Solids	mg/L	30	50			
PH	standard units			6.0	9.0	

2. Final Effluent Limitations – Discharge Point 002

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point **002**, with compliance measured at Monitoring Location EFF-002 as described in the attached MRP (Attachment E):

- a. **Total residual chlorine**: Effluent total residual chlorine shall not exceed the following:
 - i. 0.01 mg/L as a four-day average; and
 - ii. 0.02 mg/L as a one-hour average.
- b. **Acute Toxicity**: Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

Minimum for any one bioassay	70%
Median for any three or more consecutive bioassays ·	90%

- c. **Temperature.** The maximum temperature of the discharge shall not exceed the natural receiving water temperature by more than 20°F.
- 3. Interim Effluent Limitations Not Applicable

B. Low Threat Discharges

Low threat discharges are defined as well development water including testing or startup, construction dewatering, pump/well testing, pipeline/tank flushing or dewatering, condensate discharges, miscellaneous water supply system discharges, and other miscellaneous dewatering/low threat discharges. Low threat discharges must not exceed 0.25 mgd if the duration is greater than four months. Low threat discharges shall maintain compliance with the following effluent limitations with compliance measured at and described in the attached MRP.

		Low Threat Discharges Limitations					
Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Instantaneous Min	Instantaneous Max	
Flow ¹	mgd			0.25			
Settleable Solids	mL/L-hr	10	15				
Total Suspended Solids	mg/L	10	15				
Chlorine, Total Residual	mg/L					0.02	

¹ Limitation applies if flow is greater than four months in duration.

- C. Land Discharge Specifications Not Applicable
- D. Reclamation Specifications Not Applicable

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. The discharge shall not cause the following in the unnamed tributary of New York Creek:

- 1. **Bacteria**. The fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, to exceed a geometric mean of 200 MPN/100 mL, nor more than ten percent of the total number of fecal coliform samples taken during any 30-day period to exceed 400 MPN/100 mL.
- 2. **Biostimulatory Substances**. Water to contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.
- 3. **Chemical Constituents**. Chemical constituents to be present in concentrations that adversely affect beneficial uses.
- 4. **Color**. Discoloration that causes nuisance or adversely affects beneficial uses.

5. Dissolved Oxygen:

- a. The monthly median of the mean daily dissolved oxygen concentration to fall below 85 percent of saturation in the main water mass;
- The 95 percentile dissolved oxygen concentration to fall below 75 percent of saturation; nor
- c. The dissolved oxygen concentration to be reduced below 7.0 mg/L at any time.
- 6. **Floating Material**. Floating material to be present in amounts that cause nuisance or adversely affect beneficial uses.
- 7. **Oil and Grease**. Oils, greases, waxes, or other materials to be present in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.
- 8. **pH**. The pH to be depressed below 6.5, raised above 8.5, nor changed by more than 0.5 units.

9. Pesticides:

- a. Pesticides to be present, individually or in combination, in concentrations that adversely affect beneficial uses;
- b. Pesticides to be present in bottom sediments or aquatic life in concentrations that adversely affect beneficial uses;

- c. Total identifiable persistent chlorinated hydrocarbon pesticides to be present in the water column at concentrations detectable within the accuracy of analytical methods approved by USEPA or the Executive Officer.
- d. Pesticide concentrations to exceed those allowable by applicable antidegradation policies (see State Water Board Resolution No. 68-16 and 40 CFR §131.12.).
- e. Pesticide concentrations to exceed the lowest levels technically and economically achievable.
- f. Pesticides to be present in concentration in excess of the maximum contaminant levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15.
- g. Thiobencarb to be present in excess of 1.0 μg/L.

10. Radioactivity:

- a. Radionuclides to be present in concentrations that are harmful to human, plant, animal, or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.
- b. Radionuclides to be present in excess of the maximum contaminant levels specified in Table 4 (MCL Radioactivity) of Section 64443 of Title 22 of the California Code of Regulations.
- 11. **Suspended Sediments**. The suspended sediment load and suspended sediment discharge rate of surface waters to be altered in such a manner as to cause nuisance or adversely affect beneficial uses.
- 12. **Settleable Substances**. Substances to be present in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.
- 13. **Suspended Material**. Suspended material to be present in concentrations that cause nuisance or adversely affect beneficial uses.
- 14. Taste and Odors. Taste- or odor-producing substances to be present in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses.
- 15. **Temperature**. The natural temperature to be increased by more than 5°F.
- 16. **Toxicity**. Toxic substances to be present, individually or in combination, in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.
- 17. **Turbidity**. The turbidity to increase as follows:
 - a. More than 1 Nephelometric Turbidity Unit (NTU) where natural turbidity is between 0 and 5 NTUs.
 - b. More than 20 percent where natural turbidity is between 5 and 50 NTUs.

- c. More than 10 NTU where natural turbidity is between 50 and 100 NTUs.
- d. More than 10 percent where natural turbidity is greater than 100 NTUs.

B. Groundwater Limitations

The discharge shall not cause the underlying groundwater to be degraded.

VI. PROVISIONS

A. Standard Provisions

- The Discharger shall comply with all Standard Provisions included in Attachment D
 of this Order.
- 2. The Discharger shall comply with the following provisions:
 - a. If the Discharger's wastewater treatment plant is publicly owned or subject to regulation by California Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to Title 23, CCR, Division 3, Chapter 26.
 - b. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:
 - i. violation of any term or condition contained in this Order;
 - ii. obtaining this Order by misrepresentation or by failing to disclose fully all relevant facts:
 - iii. a change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; and
 - iv. a material change in the character, location, or volume of discharge.

The causes for modification include:

- New regulations. New regulations have been promulgated under Section 405(d) of the Clean Water Act, or the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued.
- Land application plans. When required by a permit condition to incorporate a
 land application plan for beneficial reuse of sewage sludge, to revise an
 existing land application plan, or to add a land application plan.
- Change in sludge use or disposal practice. Under 40 Code of Federal Regulations (CFR) 122.62(a)(1), a change in the Discharger's sludge use or

disposal practice is a cause for modification of the permit. It is cause for revocation and reissuance if the Discharger requests or agrees.

The Regional Water Board may review and revise this Order at any time upon application of any affected person or the Regional Water Board's own motion.

c. If a toxic effluent standard or prohibition (including any scheduled compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the CWA, or amendments thereto, for a toxic pollutant that is present in the discharge authorized herein, and such standard or prohibition is more stringent than any limitation upon such pollutant in this Order, the Regional Water Board will revise or modify this Order in accordance with such toxic effluent standard or prohibition.

The Discharger shall comply with effluent standards and prohibitions within the time provided in the regulations that establish those standards or prohibitions, even if this Order has not yet been modified.

- d. This Order shall be modified, or alternately revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the CWA, if the effluent standard or limitation so issued or approved:
 - i. contains different conditions or is otherwise more stringent than any effluent limitation in the Order; or
 - ii. controls any pollutant limited in the Order.

The Order, as modified or reissued under this paragraph, shall also contain any other requirements of the CWA then applicable.

- e. The provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.
- f. The Discharger shall take all reasonable steps to minimize any adverse effects to waters of the State or users of those waters resulting from any discharge or sludge use or disposal in violation of this Order. Reasonable steps shall include such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge or sludge use or disposal.
- g. The Discharger shall ensure compliance with any existing or future pretreatment standard promulgated by USEPA under Section 307 of the CWA, or amendment thereto, for any discharge to the municipal system.
- h. The discharge of any radiological, chemical or biological warfare agent or high-level, radiological waste is prohibited.

- ORDER NO. R5-2007-0078 NPDES NO. CA0084824
- A copy of this Order shall be maintained at the discharge facility and be available at all times to operating personnel. Key operating personnel shall be familiar with its content.
- j. Safeguard to electric power failure:
 - i. The Discharger shall provide safeguards to assure that, should there be reduction, loss, or failure of electric power, the discharge shall comply with the terms and conditions of this Order.
 - ii. Upon written request by the Regional Water Board the Discharger shall submit a written description of safeguards. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means. A description of the safeguards provided shall include an analysis of the frequency, duration, and impact of power failures experienced over the past five years on effluent quality and on the capability of the Discharger to comply with the terms and conditions of the Order. The adequacy of the safeguards is subject to the approval of the Regional Water Board.
 - iii. Should the treatment works not include safeguards against reduction, loss, or failure of electric power, or should the Regional Water Board not approve the existing safeguards, the Discharger shall, within ninety days of having been advised in writing by the Regional Water Board that the existing safeguards are inadequate, provide to the Regional Water Board and USEPA a schedule of compliance for providing safeguards such that in the event of reduction, loss, or failure of electric power, the Discharger shall comply with the terms and conditions of this Order. The schedule of compliance shall, upon approval of the Regional Water Board, become a condition of this Order.
- k. The Discharger, upon written request of the Regional Water Board, shall file with the Board a technical report on its preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. This report may be combined with that required under Regional Water Board Standard Provision VI.A.2.m.

The technical report shall:

- Identify the possible sources of spills, leaks, untreated waste by-pass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.
- ii. Evaluate the effectiveness of present facilities and procedures and state when they became operational.

iii. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule containing interim and final dates when they will be constructed, implemented, or operational.

The Regional Water Board, after review of the technical report, may establish conditions which it deems necessary to control accidental discharges and to minimize the effects of such events. Such conditions shall be incorporated as part of this Order, upon notice to the Discharger.

- I. A publicly owned treatment works (POTW) whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the Discharger shall notify the Regional Water Board by 31 January. A copy of the notification shall be sent to appropriate local elected officials, local permitting agencies and the press. Within 120 days of the notification, the Discharger shall submit a technical report showing how it will prevent flow volumes from exceeding capacity or how it will increase capacity to handle the larger flows. The Regional Water Board may extend the time for submitting the report.
- m. The Discharger shall submit technical reports as directed by the Executive Officer. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code, sections 6735, 7835, and 7835.1. To demonstrate compliance with Title 16, CCR, sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.
- Laboratories that perform sample analyses must be identified in all monitoring reports submitted to the Regional Water Board and USEPA.
- The Discharger shall conduct analysis on any sample provided by USEPA as part of the Discharge Monitoring Quality Assurance (DMQA) program. The results of any such analysis shall be submitted to USEPA's DMQA manager.
- p. Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to mixing with the receiving waters. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.

- q. All monitoring and analysis instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary, at least yearly, to ensure their continued accuracy.
- r. The Discharger shall file with the Regional Water Board technical reports on self-monitoring performed according to the detailed specifications contained in the Monitoring and Reporting Program attached to this Order.
- s. The results of all monitoring required by this Order shall be reported to the Regional Water Board, and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this Order. Unless otherwise specified, discharge flows shall be reported in terms of the monthly average and the daily maximum discharge flows.
- t. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the CWC, including, but not limited to, sections 13385, 13386, and 13387.
- Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. (CWC section 1211)
- v. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, maximum daily effluent limitation, 1-hour average effluent limitation, or receiving water limitation contained in this Order, the Discharger shall notify the Regional Water Board by telephone (530) 224-4845 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Regional Water Board waives confirmation. The written notification shall include the information required by Attachment D, Section V.E.1 [40 CFR section 122.41(I)(6)(i)].

B. Monitoring and Reporting Program (MRP) Requirements

1. The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E of this Order.

C. Special Provisions

1. Reopener Provisions

a. This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special conditions included in this Order. These special conditions may be, but are not limited to, fish tissue sampling, whole effluent toxicity, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data.

- b. Conditions that necessitate a major modification of a permit are described in 40 CFR section 122.62, including:
 - If new or amended applicable water quality standards are promulgated or approved pursuant to Section 303 of the CWA, or amendments thereto, this permit may be reopened and modified in accordance with the new or amended standards.
 - ii. When new information, that was not available at the time of permit issuance, would have justified different permit conditions at the time of issuance.
- c. Whole Effluent Toxicity. As a result of a Toxicity Reduction Evaluation (TRE), this Order may be reopened to include a chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if the State Water Board revises the SIP's toxicity control provisions that would require the establishment of numeric chronic toxicity effluent limitations, this Order may be reopened to include a numeric chronic toxicity effluent limitation based on the new provisions.
- d. Water Effects Ratios (WER) and Metal Translators. A default WER of 1.0 has been used in this Order for calculating CTR criteria for applicable priority pollutant inorganic constituents. In addition, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total recoverable when conducting the reasonable potential analysis. If the Discharger performs studies to determine site-specific WERs and/or site-specific dissolved-to-total metal translators, this Order may be reopened to modify the effluent limitations for the applicable inorganic constituents.
- e. Constituent Study. If after review of the study results it is determined that the discharge has reasonable potential to cause or contribute to an exceedance of a water quality objective this Order may be reopened and effluent limitations added for the subject constituents.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. Chronic Whole Effluent Toxicity. For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Discharger to conduct chronic whole effluent toxicity testing, as specified in the Monitoring and Reporting Program (Attachment E, Section V.). Furthermore, this Provision requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity. If the discharge exceeds the toxicity numeric monitoring trigger established in this Provision, the Discharger is required to initiate a Toxicity Reduction Evaluation (TRE), in accordance with an approved TRE Work Plan, and take actions to mitigate the impact of the discharge and prevent reoccurrence of toxicity. A TRE is a site-specific study conducted in a

stepwise process to identify the source(s) of toxicity and the effective control measures for effluent toxicity. TREs are designed to identify the causative agents and sources of whole effluent toxicity, evaluate the effectiveness of the toxicity control options, and confirm the reduction in effluent toxicity.

The numeric toxicity monitoring trigger is > 1 TUc (where TUc = 100/NOEC). The monitoring trigger is not an effluent limitation; it is the toxicity threshold at which the Discharger is required to initiate a TRE.

Within sixty (60) days of notification by the laboratory of exceedance of the numeric monitoring trigger above (i.e. a failed test), the Discharger shall submit to the Regional Water Board a TRE Work Plan for approval by the Executive Officer. The TRE Work Plan shall outline the procedures for identifying the source(s) of, and reducing or eliminating effluent toxicity. The TRE Work Plan must be developed in accordance with EPA guidance¹.

3. Best Management Practices and Pollution Prevention

a. Pollutant Minimization Program. The Discharger shall develop and conduct a Pollutant Minimization Program (PMP) as further described below when there is evidence (e.g., sample results reported as DNQ when the effluent limitation is less than the MDL, sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that a priority pollutant is present in the effluent above an effluent limitation and either: 1) A sample result is reported as DNQ and the effluent limitation is less than the RL; or 2) A sample result is reported as ND and the effluent limitation is less than the MDL, using definitions described in Attachment A and reporting protocols described in MRP.

The PMP shall include, but not be limited to, the following actions and submittals acceptable to the Regional Water Board:

- An annual review and semi-annual monitoring of potential sources of the reportable priority pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling;
- ii. Quarterly monitoring for the reportable priority pollutant(s) in the influent to the wastewater treatment system;
- iii. Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutant(s) in the effluent at or below the effluent limitation;
- iv. Implementation of appropriate cost-effective control measures for the reportable priority pollutant(s), consistent with the control strategy; and

¹ See Attachment F (Fact Sheet) Section VII.B.2.a. for a list of EPA guidance documents that must be considered in development of the TRE Workplan.

- v. An annual status report that shall be sent to the Regional Water Board including:
 - (1) All PMP monitoring results for the previous year;
 - (2) A list of potential sources of the reportable priority pollutant(s);
 - (3) A summary of all actions undertaken pursuant to the control strategy; and
 - (4) A description of actions to be taken in the following year.
- 4. Construction, Operation and Maintenance Specifications Not Applicable
- 5. Special Provisions for Municipal Facilities (POTWs Only) Not Applicable
- 6. Other Special Provisions
 - a. Sludge Disposal Requirements
 - i. Collected screenings, sludge, and other solids removed from liquid wastes shall be disposed of in a manner approved by the Executive Officer, and consistent with Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste, as set forth in Title 27, CCR, Division 2, Subdivision 1, Section 20005, et seq.
 - ii. Any proposed change in sludge use or disposal practice from a previously approved practice shall be reported to the Executive Officer and USEPA Regional Administrator at least **90 days** in advance of the change.
 - iii. By **PERMIT EFFECTIVE DATE + 180 DAYS**, the Discharger shall submit an updated sludge disposal plan describing the annual volume of sludge generated by the plant and specifying the disposal practices as described in Sludge Monitoring Section VIII.A. of the MRP.

b. Low Threat Discharge Requirements

- The following discharges are authorized by this Order provided: a) they do not contain significant quantities of pollutants, and b) they do not exceed
 0.25 mgd, unless four months or less in duration.
 - 1. Well development water including testing or start up;
 - 2. Construction dewatering;
 - 3. Pump/well testing;
 - 4. Pipeline/tank pressure testing;

- 5. Pipeline/tank flushing or dewatering;
- 6. Condensate discharges;
- 7. Miscellaneous water supply system discharges; and
- 8. Other miscellaneous dewatering/low threat discharges.
- ii. Collected screenings and other solids removed from piping, tanks, and other equipment prior to discharge shall be disposed of in a manner consistent with Title 23 of the CCR Chapter 15, Division 3.

iii. Pollution Prevention, Monitoring, and Reporting Plan (PPMRP)

The Discharger shall prepare a PPMRP for Low Threat Discharges, to address all expected discharges. The PPMRP should address or include the following:

- The PPMRP shall provide a general description of the raw water supply and distribution systems, types and frequency of potential discharges, potential discharge locations, possible pollutant types, possible flow rates and duration, and receiving waters.
- 2. The PPMRP shall identify best management practices (BMPs) for each type of discharge that will be used to prevent or minimize the discharge of pollutants. Where appropriate, BMPs shall include, but not be limited to the following:
 - a. Prior to testing or flushing of empty tanks and pipelines, solid wastes shall be removed for proper disposal.
 - Erosion and sedimentation control practices at discharge point(s) shall be implemented, if necessary. Discharges shall adhere to applicable State and local recommended procedures for erosion and sediment control.
 - c. The discharge of waters must be controlled to the lowest possible rate to minimize potential impacts on aquatic life and to reduce erosion. Adequate dewatering structures and velocity dissipation devices shall be used when necessary to prevent and minimize erosion, stream scouring, increases in turbidity, and any other potential damage to receiving waters. Such devices may include splash pads, straw bales, silt fences, and vegetated buffer zones. The discharge shall not cause downstream flooding conditions.

- d. Discharges shall be conducted to avoid potential pollution to private or public water wells.
- e. Dechlorination methods shall be used to assure that discharges to surface waters do not contain chlorine residual in excess of 0.02 mg/L.
- f. The Discharger shall evaluate the need for treatment of low threat waters before discharge to meet the effluent limitations and requirements of this Order. Possible treatment technologies to evaluate include filtration, settling ponds, and/or pumping to upland areas.
- 3. Develop a representative sampling and monitoring program.

The PPMRP for Low Threat Discharges shall include a monitoring schedule for low threat discharges. The plan shall include the following provisions:

- The discharge (rate of flow and duration) shall be estimated for all discharges.
- b. Sampling and analyses are not required for every dewatering water and other low threat discharge, if the Discharger can provide reasonable assurance that discharges will comply with the prohibitions and limitations of this Order. However, a sampling and analysis program shall be developed and implemented to monitor a representative selection of low threat discharges to verify that the discharges comply with this Order.
- c. When reasonable assurance cannot be provided that a discharge will comply with the prohibitions and limitations of this Order, at least one sample of the discharge shall be collected per day at a location prior to its entry into a receiving body of water. The sample shall be collected to reflect the character of the discharge during the first 1,000 gallons of the discharge. This sample shall be analyzed for chlorine and settleable and suspended solids.
- d. When reasonable assurance cannot be provided that a discharge will comply with the prohibitions and limitations of this Order, and the discharge will be greater than 50,000 gallons, at least two samples shall be collected per day at a location prior to its entry into a receiving body of water. Samples shall be collected to reflect the character of the discharge during the first and last 1,000 gallons of the discharge. These samples shall be analyzed for chlorine and settleable and suspended solids.

- e. When reasonable assurance cannot be provided that a discharge will comply with the prohibitions and limitations of this Order, observations of the discharge and of the receiving water shall be made and recorded on a daily basis and reflect the worst-case conditions observed in terms of: floating or suspended matter, discoloration and turbidity, erosion, odors, films, sheens, and other potential nuisance conditions.
- 4. The low threat discharges shall maintain compliance with the effluent limitations described in Low Threat Discharge Limitations Section IV.B of this Order, with compliance measured at monitoring locations as described in the attached MRP.
- 5. The PPMRP shall be revised and updated as necessary to reflect applicable changes in the Discharger's practices.
- 6. The Discharger shall meet all other requirements and conditions of this Order.
- c. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Regional Water Board.

To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Regional Water Board and a statement. The statement shall comply with the signatory and certification requirements in the Federal Standard Provisions (Attachment D, Section V.B.) and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer shall be approved or disapproved in writing by the Executive Officer.

7. Compliance Schedules – Not Applicable

VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in section IV of this Order will be determined as specified below:

A. **TSS and Settleable Solids Effluent Limitations**. Compliance with the final effluent limitations for TSS and settleable solids required in Section IV. A shall be ascertained by grab samples. Any excursion above the average monthly and/or maximum daily effluent limitations is a violation.

- B. **pH Effluent Limitations.** Compliance with the final effluent limitations for pH required in Section IV. A for pH shall be ascertained by grab samples. Any excursion above or below the instantaneous minimum or maximum is a violation.
- C. **Total Residual Chlorine Effluent Limitations.** Any excursion above the 1-hour average or 4-day average total residual chlorine effluent limitations is a violation.

ATTACHMENT A - DEFINITIONS

Arithmetic Mean (u), also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean = $u = \Sigma x / n$ where: Σx is the sum of the measured ambient water concentrations, and n is the number of

samples.

Average Monthly Effluent Limitation (AMEL): the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL): the highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Best Practicable Treatment or Control (BPTC): BPTC is a requirement of State Water Resources Control Board Resolution 68-16 – "Statement of Policy with Respect to Maintaining High Quality of Waters in California" (referred to as the "Antidegradation Policy"). BPTC is the treatment or control of a discharge necessary to assure that, "(a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained." Pollution is defined in CWC Section 13050(I). In general, an exceedance of a water quality objective in the Basin Plan constitutes "pollution".

Bioaccumulative pollutants are those substances taken up by an organism from its surrounding medium through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

Carcinogenic pollutants are substances that are known to cause cancer in living organisms.

Coefficient of Variation (CV) is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Daily Discharge: Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the

arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ) are those sample results less than the RL, but greater than or equal to the laboratory's MDL.

Dilution Credit is the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

Effluent Concentration Allowance (ECA) is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in U.S. EPA guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

Enclosed Bays means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

Estimated Chemical Concentration is the estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Estuaries means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

Inland Surface Waters are all surface waters of the State that do not include the ocean, enclosed bays, or estuaries.

Instantaneous Maximum Effluent Limitation: the highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation: the lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Maximum Daily Effluent Limitation (MDEL) means the highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Median is the middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the n/2 and n/2+1).

Method Detection Limit (MDL) is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in title 40 of the Code of Federal Regulations, Part 136, Attachment B, revised as of July 3, 1999.

Minimum Level (ML) is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

Mixing Zone is a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

Not Detected (ND) are those sample results less than the laboratory's MDL.

Ocean Waters are the territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Water Board's California Ocean Plan.

Persistent pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program (PMP) means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The

goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State or Regional Water Board.

Reporting Level (RL) is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

Satellite Collection System is the portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility that a sanitary sewer system is tributary to.

Source of Drinking Water is any water designated as municipal or domestic supply (MUN) in a Regional Water Board Basin Plan.

Standard Deviation (σ) is a measure of variability that is calculated as follows:

$$\sigma = (\sum [(x - u)^2]/(n - 1))^{0.5}$$
 where:

x is the observed value:

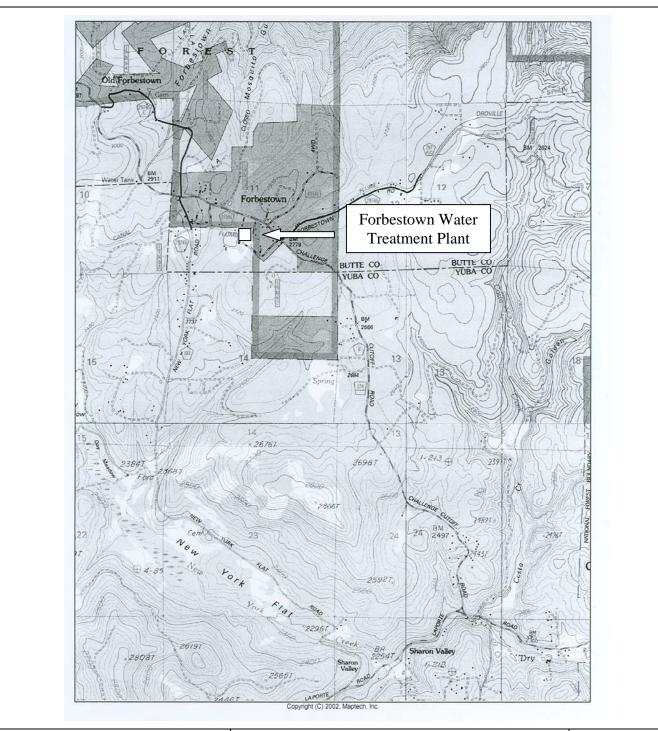
u is the arithmetic mean of the observed values; and

n is the number of samples.

Toxicity Reduction Evaluation (TRE) is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity,

evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

ATTACHMENT B - MAP



Drawing Reference:

FORBESTOWN & RACKERBY U.S.G.S TOPOGRAPHIC MAP 7.5 MINUTE QUADRANGLE

Photorevised 1973

Not to scale

SITE LOCATION MAP

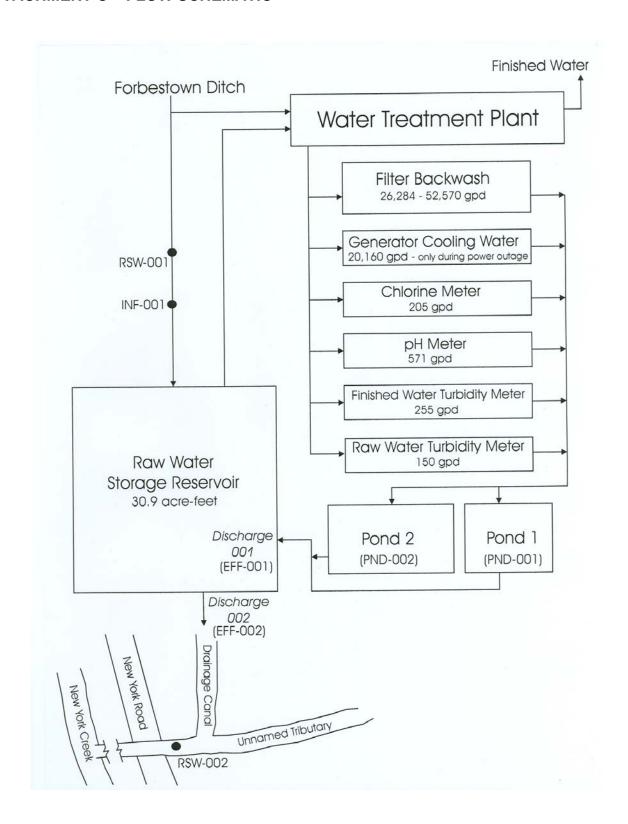
NORTH YUBA WATER DISTRICT FORBESTOWN WATER TREATMENT PLANT

BUTTE COUNTY



Attachment B –Map B-1

ATTACHMENT C - FLOW SCHEMATIC



ATTACHMENT D - STANDARD PROVISIONS

I. STANDARD PROVISIONS - PERMIT COMPLIANCE

A. Duty to Comply

- 1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (40 C.F.R. § 122.41(a).)
- 2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 C.F.R. § 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order. (40 C.F.R. § 122.41(c).)

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment. (40 C.F.R. § 122.41(d).)

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 C.F.R. § 122.41(e).)

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 122.41(g).)

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 C.F.R. § 122.5(c).)

F. Inspection and Entry

The Discharger shall allow the Regional Water Board, State Water Board, United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (40 C.F.R. § 122.41(i); Water Code, § 13383):

- Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (40 C.F.R. § 122.41(i)(1));
- 2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (40 C.F.R. § 122.41(i)(2));
- 3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (40 C.F.R. § 122.41(i)(3)); and
- 4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (40 C.F.R. § 122.41(i)(4).)

G. Bypass

1. Definitions

- a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 122.41(m)(1)(i).)
- b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii).)
- Bypass not exceeding limitations. The Discharger may allow any bypass to occur
 which does not cause exceedances of effluent limitations, but only if it is for essential
 maintenance to assure efficient operation. These bypasses are not subject to the
 provisions listed in Standard Provisions Permit Compliance I.G.3, I.G.4, and I.G.5
 below. (40 C.F.R. § 122.41(m)(2).)

- Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):
 - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 122.41(m)(4)(i)(A));
 - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and
 - c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C).)
- 4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions Permit Compliance I.G.3 above. (40 C.F.R. § 122.41(m)(4)(ii).)

5. Notice

- a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. (40 C.F.R. § 122.41(m)(3)(i).)
- b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions Reporting V.E below (24-hour notice). (40 C.F.R. § 122.41(m)(3)(ii).)

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 C.F.R. § 122.41(n)(1).)

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance I.H.2 below are met. No determination made during administrative review of claims that noncompliance was

caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. § 122.41(n)(2).).

- 2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. § 122.41(n)(3)):
 - a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));
 - b. The permitted facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));
 - c. The Discharger submitted notice of the upset as required in Standard Provisions Reporting V.E.2.b below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and
 - d. The Discharger complied with any remedial measures required under Standard Provisions Permit Compliance I.C above. (40 C.F.R. § 122.41(n)(3)(iv).)
- 3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4).)

II. STANDARD PROVISIONS - PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 C.F.R. § 122.41(f).)

B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit. (40 C.F.R. § 122.41(b).)

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 C.F.R. § 122.41(I)(3); § 122.61.)

III. STANDARD PROVISIONS - MONITORING

- **A.** Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. § 122.41(j)(1).)
- **B.** Monitoring results must be conducted according to test procedures under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503 unless other test procedures have been specified in this Order. (40 C.F.R. § 122.41(j)(4); § 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS - RECORDS

A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 C.F.R. § 122.41(j)(2).)

B. Records of monitoring information shall include:

- 1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));
- 2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));
- 3. The date(s) analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));
- 4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));
- 5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and
- 6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)

C. Claims of confidentiality for the following information will be denied (40 C.F.R. § 122.7(b)):

- 1. The name and address of any permit applicant or Discharger (40 C.F.R. § 122.7(b)(1)); and
- 2. Permit applications and attachments, permits and effluent data. (40 C.F.R. § 122.7(b)(2).)

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, State Water Board, or USEPA within a reasonable time, any information which the Regional Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 C.F.R. § 122.41(h); Water Code, § 13267.)

B. Signatory and Certification Requirements

- 1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 C.F.R. § 122.41(k).)
- 2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 C.F.R. § 122.22(a)(3).).
- 3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. § 122.22(b)(1));
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and
 - c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3).)
- 4. If an authorization under Standard Provisions Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall

operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. § 122.22(c).)

5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." (40 C.F.R. § 122.22(d).)

C. Monitoring Reports

- 1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 C.F.R. § 122.22(I)(4).)
- Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 C.F.R. § 122.41(I)(4)(i).)
- 3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under Part 136 or, in the case of sludge use or disposal, approved under Part 136 unless otherwise specified in Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (40 C.F.R. § 122.41(I)(4)(ii).)
- 4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. § 122.41(I)(4)(iii).)

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 C.F.R. § 122.41(I)(5).)

E. Twenty-Four Hour Reporting

- 1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 C.F.R. § 122.41(I)(6)(i).)
- 2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 C.F.R. § 122.41(I)(6)(ii)):
 - a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(I)(6)(ii)(A).)
 - b. Any upset that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(I)(6)(ii)(B).)
- 3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 C.F.R. § 122.41(I)(6)(iii).)

F. Planned Changes

The Discharger shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 C.F.R. § 122.41(I)(1)):

- The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 C.F.R. § 122.41(l)(1)(i)); or
- 2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1). (40 C.F.R. § 122.41(I)(1)(ii).)
- 3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 C.F.R.§ 122.41(I)(1)(iii).)

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Regional Water Board or State Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements. (40 C.F.R. § 122.41(I)(2).)

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. (40 C.F.R. § 122.41(I)(7).)

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information. (40 C.F.R. § 122.41(I)(8).)

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387.

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Regional Water Board as soon as they know or have reason to believe (40 C.F.R. § 122.42(a)):

- 1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 C.F.R. § 122.42(a)(1)):
 - a. 100 micrograms per liter (ug/L) (40 C.F.R. § 122.42(a)(1)(i));
 - b. 200 ug/L for acrolein and acrylonitrile; 500 ug/L for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(1)(ii));
 - c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(1)(iii)); or

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- d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(1)(iv).)
- 2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" (40 C.F.R. § 122.42(a)(2)):
 - a. 500 micrograms per liter (ug/L) (40 C.F.R. § 122.42(a)(2)(i));
 - b. 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(2)(ii));
 - c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(2)(iii)); or
 - d. The level established by the Regional Water Board in accordance with section 122.44(f). (40 C.F.R. § 122.42(a)(2)(iv).)

ATTACHMENT E - MONITORING AND REPORTING PROGRAM

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ATTACHMENT E - MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations section 122.48 requires that all NPDES permits specify monitoring and reporting requirements. Water Code Sections 13267 and 13383 also authorize the Regional Water Quality Control Board (Regional Water Board) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements, which implement the federal and state regulations.

I. GENERAL MONITORING PROVISIONS

- A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and the approval of this Regional Water Board.
- B. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. In the event a certified laboratory is not available to the Discharger, analyses performed by a noncertified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program must be kept in the laboratory and shall be available for inspection by Regional Water Board staff. The Quality Assurance-Quality Control Program must conform to USEPA guidelines or to procedures approved by the Regional Water Board.
- C. All analyses shall be performed in a laboratory certified to perform such analyses by the California Department of Health Services. Laboratories that perform sample analyses shall be identified in all monitoring reports.
- D. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.
- E. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this Monitoring and Reporting Program.

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description (include Latitude and Longitude when available)
	INF-001	Forbestown Ditch water downstream of RSW-001
001	EFF-001	Outfall from settling ponds
002	EFF-002	Outfall from storage reservoir
	EFF-001A	Monitoring locations are identified when low threat discharges are identified
	RSW-001	Forbestown Ditch water, collected from the Facility's piped diversion line to the reservoir
	RSW-002	Unnamed tributary to New York Creek, downstream of the drainage canal confluence and upstream of the New York Flat Road crossing, at a point agreed upon between the Discharger and Regional Board Staff
	PND-001	Settling Pond No. 1 solids
	PND-002	Settling Pond No. 2 solids

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF-001

1. The Discharger shall monitor influent to the facility at the Forbestown Ditch, downstream of RSW-001, at INF-001 as follows:

Table E-2. Influent Monitoring

Parameter ¹	Units	Sample Type	Minimum Sampling Frequency
Electrical Conductivity @ 25°C	umhos/cm	Grab	Twice per month

¹Pollutants shall be analyzed using the analytical methods described in 40 CFR sections 136.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

1. The Discharger shall monitor filter backwash at EFF-001 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level:

Table E-3. Effluent Monitoring

Parameter ¹	Units	Sample Type	Minimum Sampling Frequency
Flow	mgd	Meter	Continuous
Turbidity	NTU	Grab	Weekly
Total Suspended Solids	mg/L	Grab	Twice per month
Settleable Solids	mL/L	Grab	Twice per month
рН	standard units	Grab	Twice per month
Electrical Conductivity @ 25°C	umhos/cm	Grab	Twice per month
Bis (2-ethylhexyl) phthalate	ug/L	Grab	Quarterly ²
Aluminum, Total	ug/L	Grab	Quarterly
Priority Pollutants ^{3, 4}	ug/L	Grab	1/Permit lifecycle

¹Pollutants shall be analyzed using the analytical methods described in 40 CFR sections 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.

B. Monitoring Location EFF-002

1. The Discharger shall monitor the combined filter backwash and raw water at EFF-002 as follows:

Table E-4. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Chlorine, total residual ¹	mg/L	Grab	Twice per month
Turbidity ^{1,2}	NTU	Grab	Weekly
Acute toxicity ³	% survival	Grab	Annually
pH ^{1,4}	standard units	Grab	Annually
Ammonia ^{1,4}	mg/L	Grab	Annually

¹Pollutants shall be analyzed using the analytical methods described in 40 CFR sections 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.

²To be monitored quarterly for the first year. If the Regional Water Board determines there is no reasonable potential after four quarters of sampling, the Discharger can cease quarterly monitoring.

³For priority pollutant constituents with effluent limitations, detection limits shall be below the effluent limitations. If the lowest minimum level (ML) published in Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Plan or SIP) is not below the effluent limitation, the detection limit shall be the lowest ML. For priority pollutant constituents without effluent limitations, the detection limits shall be equal to or less than the lowest ML published in Appendix 4 of the SIP.

Concurrent with receiving surface water sampling.

²To be sampled weekly **only** when EFF-001 is greater than 10 NTU.

³96-hour static bioassay using rainbow trout. Sample shall be collected during a period when overflow from the settling ponds are discharging to the storage reservoir and the reservoir is discharging to the unnamed tributary. Acute toxicity shall be conducted in accordance with Section V.A of this Monitoring and Reporting Program.

⁴To be sampled concurrently with acute toxicity sampling.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

- A. **Acute Toxicity Testing.** The Discharger shall conduct acute toxicity testing to determine whether the effluent is contributing acute toxicity to the receiving water. The Discharger shall meet the following acute toxicity testing requirements:
 - 1. <u>Monitoring Frequency</u> the Discharger shall perform annual acute toxicity testing.
 - 2. <u>Sample Types</u> For static non-renewal and static renewal testing, the samples shall be grab samples and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at the effluent monitoring location EFF-002.
 - 3. <u>Test Species</u> Test species shall be rainbow trout (Oncorchus mykiss).
 - 4. <u>Methods</u> The acute toxicity testing samples shall be analyzed using EPA-821-R-02-012, Fifth Edition. Temperature, total residual chlorine, and pH shall be recorded at the time of sample collection. No pH adjustment may be made unless approved by the Executive Officer.
 - 5. <u>Test Failure</u> If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger must re-sample and re-test as soon as possible, not to exceed 7 days following notification of test failure.
- B. **Chronic Toxicity Testing**. The Discharger shall conduct three species chronic toxicity testing to determine whether the effluent is contributing chronic toxicity to the receiving water. The Discharger shall meet the following chronic toxicity testing requirements:
 - 1. <u>Monitoring Frequency</u> the Discharger shall sample once during the 5-year permit period for three species chronic toxicity testing.
 - Sample Types Effluent samples shall be grab samples and shall be representative
 of the volume and quality of the discharge. The effluent samples shall be taken at
 the effluent monitoring location specified in the Monitoring and Reporting Program.
 The receiving water control shall be a grab sample obtained from the RSW-001
 sampling location, as identified in the Monitoring and Reporting Program.
 - 3. <u>Sample Volumes</u> Adequate sample volumes shall be collected to provide renewal water to complete the test in the event that the discharge is intermittent.
 - 4. <u>Test Species</u> Chronic toxicity testing measures sublethal (e.g. reduced growth, reproduction) and/or lethal effects to test organisms exposed to an effluent compared to that of the control organisms. The Discharger shall conduct chronic toxicity tests with:
 - The cladoceran, water flea, Ceriodaphnia dubia (survival and reproduction test);
 - The fathead minnow, Pimephales promelas (larval survival and growth test); and

• The green alga, Selenastrum capricornutum (growth test).

- ORDER NO. R5-2007-0078 NPDES NO. CA0084824
- Methods The presence of chronic toxicity shall be estimated as specified in Shortterm Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, EPA/821-R-02-013, October 2002.
- 6. <u>Reference Toxicant</u> As required by the SIP, all chronic toxicity tests shall be conducted with concurrent testing with a reference toxicant and shall be reported with the chronic toxicity test results.
- 7. <u>Dilutions</u> The chronic toxicity testing shall be performed using 100% effluent and two controls. If toxicity is found in any effluent test, the Discharger must immediately retest using the dilution series identified in Table E-5, below. The receiving water control shall be used as the diluent (unless the receiving water is toxic).
- 8. <u>Test Failure</u> –The Discharger must re-sample and re-test as soon as possible, but no later than fourteen (14) days after receiving notification of a test failure. A test failure is defined as follows:
 - a. The reference toxicant test or the effluent test does not meet all test acceptability criteria as specified in the Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, EPA/821-R-02-013, October 2002 (Method Manual), and its subsequent amendments or revisions; or
 - b. The percent minimum significant difference (PMSD) measured for the test exceeds the upper PMSD bound variability criterion in Table 6 on page 52 of the Method Manual. (A retest is only required in this case if the test results do not exceed the monitoring trigger specified in Special Provisions VI. 2.a.

Table E-5. Chronic Toxicity Testing Dilution Series

		Dilutions (%)				Con	trols
Sample	100	100 75 50 25 12.5					Laboratory Water
% Effluent	100	75	50	25	12.5	0	0
% Receiving Water	0	25	50	75	87.5	100	0
% Laboratory Water	0	0	0	0	0	0	100

- ORDER NO. R5-2007-0078 NPDES NO. CA0084824
- C. **WET Testing Notification Requirements**. The Discharger shall notify the Regional Water Board within 24-hrs after the receipt of test results exceeding the monitoring trigger during regular or accelerated monitoring, or an exceedance of the acute toxicity effluent limitation.
- D. **WET Testing Reporting Requirements**. All toxicity test reports shall include the contracting laboratory's complete report provided to the Discharger and shall be in accordance with the appropriate "Report Preparation and Test Review" sections of the method manuals. At a minimum, whole effluent toxicity monitoring shall be reported as follows:
 - Chronic WET Reporting. Regular chronic toxicity monitoring results shall be reported to the Regional Water Board within 30 days following completion of the test, and shall contain, at minimum:
 - a. The results expressed in TUc, measured as 100/NOEC, and also measured as $100/LC_{50}$, $100/EC_{25}$, $100/IC_{25}$, and $100/IC_{50}$, as appropriate.
 - b. The statistical methods used to calculate endpoints;
 - c. The statistical output page, which includes the calculation of the percent minimum significant difference (PMSD);
 - d. The dates of sample collection and initiation of each toxicity test; and
 - e. The results compared to the numeric toxicity monitoring trigger.

Additionally, the monthly discharger self-monitoring reports shall contain an updated chronology of chronic toxicity test results expressed in TUc, and organized by test species, type of test (survival, growth or reproduction), and monitoring frequency, i.e., either quarterly, monthly, accelerated, or TRE. (Note: items a through c, above, are only required when testing is performed using the full dilution series.)

- 2. **Acute WET Reporting.** Acute toxicity test results shall be submitted with the monthly discharger self-monitoring reports and reported as percent survival.
- 3. **TRE Reporting.** Reports for Toxicity Reduction Evaluations shall be submitted in accordance with the schedule contained in the Discharger's approved TRE Work Plan.
- 4. **Quality Assurance (QA).** The Discharger must provide the following information for QA purposes:
 - a. Results of the applicable reference toxicant data with the statistical output page giving the species, NOEC, LOEC, type of toxicant, dilution water used, concentrations used, PMSD, and dates tested.
 - b. The reference toxicant control charts for each endpoint, which include summaries of reference toxicant tests performed by the contracting laboratory.
 - c. Any information on deviations or problems encountered and how they were dealt with.

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

VII. RECLAMATION MONITORING REQUIREMENTS - NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATER AND GROUNDWATER

A. Monitoring Location RSW-001 and RSW-002

1. The Discharger shall monitor the Forbestown Ditch and the unnamed tributary to New York Creek at RSW-001 and RSW-002. Receiving water monitoring shall be conducted when settling pond and/or storage reservoir turbidities exceed 10 NTU or during periods when the discharge from the storage reservoir is not in compliance with this Order. Receiving water sampling is not required when there is no discharge. All receiving water samples shall be grab samples. The receiving water samples shall be taken from RSW-001 and RSW-002 as follows:

Table E-6. Receiving Water Monitoring Requirements

Parameter ¹	Units	Sample Type	Minimum Sampling Frequency
рН	standard units	Grab	Weekly
Turbidity	NTU	Grab	Weekly
Chlorine residual	mg/L	Grab	Weekly

¹Pollutants shall be analyzed using the analytical methods described in 40 CFR sections 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.

In conducting the receiving water sampling, a log shall be kept of the receiving water conditions throughout the reach bounded by RSW-001 and RSW-002. Attention shall be given to the presence or absence of:

- a. Floating or suspended matter.
- b. Discoloration
- c. Bottom deposits.
- d. Aquatic life.
- e. Visible films, sheens, or coatings.
- f. Fungi, slimes, or objectionable growths.
- g. Potential nuisance.

Notes on receiving water conditions shall be summarized in the monitoring report.

IX. OTHER MONITORING REQUIREMENTS

A. Sludge Monitoring

1. Monitoring Location PND-001 and PND-002

Within 180 days from the effective date of this Order the Discharger shall submit an update of the sludge disposal plan, which shall include the following:

- 1. Estimate of average annual sludge production in dry tons and percent solids.
- 2. Description of sludge storage and alternative uses (if applicable) to disposal.
- 3. A description of disposal methods.
 - a. For landfill disposal, include:
 - i. the Regional Water Board's waste discharge requirements numbers that regulate the landfill(s) used;
 - ii. the present classifications of the landfill(s) used; and
 - iii. the names and locations of the facilities receiving sludge.
 - b. For land application, include:
 - i. the location of the site(s);
 - ii. the Regional Water Board's waste discharge requirements numbers that regulate the site(s), if applicable; and
 - iii. the application rate in lbs/acre/year (specify wet or dry); and
 - iv. subsequent uses of the land.
 - c. For incineration, include:
 - i. the names and locations of the site(s) where sludge incineration occurs
 - 1. the Regional Water Board's waste discharge requirements numbers that regulate the site(s);
 - ii. the ash disposal method: and
 - iii. the names and locations of facilities receiving ash (if applicable)
- 4. A representative characterization of sludge quality including **sludge percent solids** and quantitative results of chemical analyses for **Title 22 metals and aluminum** annually (sampling not required during years when solids are not removed from the ponds).
- 5. Status and proposed time schedule for disposal of sludge described below.
 - a. Water treatment plant sludge Settling Pond No. 1.
 - b. Water treatment plant sludge Settling Pond No. 2.

B. Low Threat Discharges

1. Monitoring Locations EFF-001A

Samples shall be collected for low threat discharges in accordance with the PPMRP developed by the Discharger. The Discharger shall monitor low threat discharges at monitoring locations EFF-001A as follows:

Table E-7. Low Threat Discharges EFF-001A

<u>Parameter</u>	<u>Units</u>	<u>Sample</u> <u>Type</u>	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	Grab	In accordance with	[1]
Settleable Solids	mL/L-hr	Grab	Low Threat Discharge	[1]
Total Suspended Solids	mg/L	Grab	Requirements Section VI.C.6.b of	[1]
Chlorine, Total Residual	mg/L	Grab	this Order.	[1]

¹ Pollutants shall be analyzed using the analytical methods described in 40 CFR 136, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.

The Discharger shall make a record of each discharge event. The record shall include:

- a. Date;
- b. Time;
- c. Location:
- d. Duration of the discharge event;
- e. Source of the water being discharged;
- f. A measurement or estimate of the total flow volume:
- g. Observations as to the appearance of the discharge and erosion that resulted;
- h. Best Management Practices that were used; and
- i. Analyses performed, if any.

When analytical results are received, they shall be included in the record.

Analyses and observations shall be recorded and reported to the Regional Water Board in a timely manner within the monthly Self-Monitoring Reports. Reporting shall also identify any violations of this Order, corrective action steps taken to comply with the Order, and complaints received from neighbors or other interested parties.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

- 1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.
- 2. Upon written request of the Regional Water Board, the Discharger shall submit a summary monitoring report. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year(s).
- 3. Compliance Time Schedules. For compliance time schedules included in the Order, the Discharger shall submit to the Regional Water Board, on or before each compliance due date, the specified document or a written report detailing compliance or noncompliance with the specific date and task. If noncompliance is reported, the Discharger shall state the reasons for noncompliance and include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when it returns to compliance with the compliance time schedule.
- 4. The Discharger shall report to the Regional Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act of 1986.
- 5. **Reporting Protocols.** The Discharger shall report with each sample result the applicable Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in Part 136.

The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

- a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.
 - For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration" (may be shortened to "Est. Conc."). The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (+ a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.
- c. Sample results less than the laboratory's MDL shall be reported as "Not Detected." or ND.

- d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from *extrapolation* beyond the lowest point of the calibration curve.
- 6. Multiple Sample Data. When determining compliance with an AMEL, AWEL, or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:
 - a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
 - b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

B. Self Monitoring Reports (SMRs)

- 1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit Self-Monitoring Reports (SMRs) using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). Until such notification is given, the Discharger shall submit hard copy SMRs. The CIWQS Web site will provide additional directions for SMR submittal in the event there will be service interruption for electronic submittal.
- Monitoring results shall be submitted to the Regional Water Board by the first day of the second month following sample collection. Quarterly and annual monitoring results shall be submitted by the first day of the second month following each calendar quarter, semi-annual period, and year, respectively.
- 3. In reporting the monitoring data, the Discharger shall arrange the data in tabular form so that the date, the constituents, and the concentrations are readily discernible. The data shall be summarized in such a manner to illustrate clearly whether the discharge complies with waste discharge requirements. The highest daily maximum for the month, monthly and weekly averages, and medians, and removal efficiencies (%) for BOD and Total Suspended Solids, shall be determined and recorded as needed to demonstrate compliance.
- 4. With the exception of flow, all constituents monitored on a continuous basis (metered), shall be reported as daily maximums, daily minimums, and daily

averages; flow shall be reported as the total volume discharged per day for each day of discharge.

- 5. If the Discharger monitors any pollutant at the locations designated herein more frequently than is required by this Order, the results of such monitoring shall be included in the calculation and reporting of the values required in the discharge monitoring report form. Such increased frequency shall be indicated on the discharge monitoring report form.
- 6. A letter transmitting the self-monitoring reports shall accompany each report. Such a letter shall include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain the penalty of perjury statement by the Discharger, or the Discharger's authorized agent, as described in the Standard Provisions.
- 7. SMRs must be submitted to the Regional Water Board, signed and certified as required by the Standard Provisions (Attachment D), to the address listed below:

Central Valley Regional Water Quality Control Board – Redding Office 415 Knollcrest Drive, Suite 100 Redding, CA 96002

8. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-8. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	1 st day of second month following monitoring period
Weekly	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	1 st day of second month following monitoring period
Twice per month	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1 st day of calendar month through last day of calendar month	1 st day of second month following monitoring period
Quarterly	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through March 31 April 1 through June 30 July 1 through Sept. 30 October 1 through Dec. 31	1st day of second month following monitoring period
Annually	January 1 following (or on) permit effective date	January 1 through December 31	1 st day of second month following monitoring period

1 / Permit Lifecycle	Permit effective date	One time in the 2 th , 3 th , or 4 th year of the permit cycle	1st day of second month following monitoring period
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C. Discharge Monitoring Reports (DMRs) - Not Applicable

D. Other Reports

Table E-9. Reporting Requirements for Special Provisions

Special Provision	Reporting Requirements
Pollution Prevention, Monitoring, and Reporting Plan (PPMRP)	Submit within 90 days of effective date of permit

- 1. Within 60 days of permit adoption, the Discharger shall submit a report outlining minimum levels, method detection limits, and analytical methods for approval, with a goal to achieve detection levels below applicable water quality criteria. At a minimum, the Discharger shall comply with the monitoring requirements for CTR constituents as outlined in Section 2.3 and 2.4 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, adopted 2 March 2000 by the State Water Resources Control Board. All peaks identified by analytical methods shall be reported.
- 2. **Annual Operations Report**. By **30 January** of each year, the Discharger shall submit a written report to the Executive Officer containing the following:
 - a. The names, certificate grades, and general responsibilities of all persons employed at the Facility.
 - b. The names and telephone numbers of persons to contact regarding the plant for emergency and routine situations.
 - c. A statement certifying when the flow meter(s) and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration.
 - d. A statement certifying whether the current operation and maintenance manual, and contingency plan, reflect the water treatment plant as currently constructed and operated, and the dates when these documents were last revised and last reviewed for adequacy.
 - e. The Discharger may also be requested to submit an annual report to the Regional Water Board with both tabular and graphical summaries of the monitoring data obtained during the previous year. Any such request shall be made in writing. The report shall discuss the compliance record. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with the waste discharge requirements.

ATTACHMENT F - FACT SHEET

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ATTACHMENT F - FACT SHEET

As described in section II of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for Dischargers in California. Only those sections or subsections of this Order that are specifically identified as "not applicable" have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as "not applicable" are fully applicable to this Discharger.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

· · · · · · ·					
WDID	5A040114003				
Discharger	North Yuba Water District				
Name of Facility	Forbestown Water Treatment Plant				
	118 Buckeye Drive				
Facility Address	Forbestown, CA 95941				
	Butte County				
Facility Contact, Title	William Suppa, General Manager, (530) 675-2567				
and Phone					
Authorized Person to	Eric Manley, Superintendent, (530) 675-2971				
Sign and Submit					
Reports					
Mailing Address	P.O. Box 299, Brownsville, CA 95919				
Billing Address	P.O. Box 299, Brownsville, CA 95919				
Type of Facility	Water Treatment Plant				
Major or Minor Facility	Minor				
Threat to Water Quality	3				
Complexity	C				
Pretreatment Program	N				
Reclamation	Not applicable				
Requirements					
Facility Permitted Flow	0.070 mgd (30-day average)				
Facility Design Flow	0.070 mgd				
Watershed	Yuba River Hydrologic Unit, Mildred Lake Hydrologic Subarea (No. 517.13)				
Receiving Water	Unnamed tributary of New York Creek, which is tributary to Dry Creek and the Yuba River (Englebright Dam to Feather River)				
Receiving Water Type	Inland surface waters				

Attachment F - Fact Sheet

- **A.** The North Yuba Water District (hereinafter Discharger) is the owner and operator of the Forbestown Water Treatment Plant (hereinafter Facility), a water treatment plant.
 - For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.
- **B.** The Facility discharges wastewater to an unnamed tributary of New York Creek, a tributary of Dry Creek and the Yuba River (Englebright Dam to Feather River), waters of the United States, and is currently regulated by Order R5-2002-0109 which was adopted on 7 June 2002 and expires on 7 June 2007.
- C. The Discharger filed a report of waste discharge (RWD) and submitted an application for renewal of its Waste Discharge Requirements (WDR) and National Pollutant Discharge Elimination System (NPDES) permit on 21 October 2006. Supplemental information was requested on 27 October 2006 and received on 22 November 2006. The RWD was deemed complete on 15 December 2006. A site visit was conducted on 19 January 2007, to observe operations and collect additional data to develop permit limitations and conditions. The Discharger submitted a notice of name change on 9 April 2007 to formally change their name from Yuba County Water District to North Yuba Water District.

II. FACILITY DESCRIPTION

The Discharger provides water treatment and supply service for the communities of Forbestown, Brownsville, Challenge, and Rackerby and services approximately 850 connections, both domestic and agricultural. The Facility is located at 118 Buckeye Drive in the community of Forbestown.

Raw water is siphoned for treatment either directly from the Forbestown Ditch or from the facility's 30.9 acre-feet capacity raw water storage reservoir that is supplied by the Forbestown Ditch. Water treatment consists of chlorination, coagulation, clarification, and filtration. The Facility's wastewater design flow is 0.070 million gallons daily (mgd). Filter backwash is discharged to one of two settling ponds. The supernatant from the settling ponds discharges into the raw water reservoir; the raw water reservoir discharges a mixture of filter backwash and raw water to an unnamed tributary of the New York Creek. A SCADA system was installed at the Facility approximately 3 years ago.

A. Description of Wastewater and Biosolids Treatment or Controls

The treatment system at the Facility consists of prechlorination, addition of an alum polymer blend (JC 1700), coagulation, filtration through synthetic bead and mixed media filters, and post-chlorination of the finished water. The synthetic beads remove 95% of the polymer coagulant; the remaining coagulant and impurities are removed in the mixed media. The mixed media is comprised of sand, anthracite, and gravel. The Facility has two filters that are each capable of treating up to 1.008 mgd. Each filter is manually flushed and backwashed at least once a day, even though the filters are set to

Attachment F – Fact Sheet F-2

automatically flush and backwash at a preset pressure differential. The flush cleans the synthetic beads and the backwash cleans the mixed media. Once a year the synthetic beads are scoured with muratic acid; several backwashes are performed to dilute the acid and the pH is taken to ensure a neutral wastewater discharge. On average, only one flush and one backwash are performed each day. A flush produces 6,496 gallons of wastewater and a backwash produces 19,788 gallons of wastewater. There are also other minor wastewater streams at the Facility that contribute to wastewater flows. The other wastewater streams are: pH meter (571 gpd), chlorine meter (205 gpd), finished water turbidity meter (approximately 255 gpd), raw water turbidity meter (approximately 150 gpd), and on rare occasion when the power is out, generator cooling water (approximately 20,160 gpd). The monthly average dry weather discharge from the settling ponds (Discharge Point 001) is approximately 45,000 gpd. The maximum dry weather discharge from Discharge Point 001 is approximately 70,000 gallons per day.

After filtration, the filtered water is sent to a 40,000-gallon clearwell and gaseous chlorine is added for disinfection. After disinfection, the finished water is sent to another clearwell for distribution. The filter backwash wastewater is not chlorinated after filtration.

The flush, backwash, and other minor wastewater streams are sent to one of two settling ponds. Dechlorination of the wastewater does not occur because sufficient contact time is provided so that residual chlorine levels are not detectable at Discharge Point 002. Only one pond is used on an annual basis; the other pond is allowed to dry out so that solids/sludge can be removed in the summer. The settling ponds have an overflow standpipe that discharges supernatant to the raw water reservoir, Discharge Point 001. The raw water reservoir also has an overflow pipe that discharges wastewater and raw water to the unnamed tributary of New York Creek, Discharge Point 002. In the summer months when water demand is highest, the raw water reservoir is allowed to continually overflow to minimize algae growth, approximately 17 million gallons per month. In the winter months, the raw water reservoir overflows sporadically, approximately 1.32 million gallons per month.

Approximately 50 cubic yards of sludge are removed from a given settling pond each year. Sludge from the settling ponds has historically been land applied on site. This permit requires the Discharger to analyze the sludge prior to disposal for Title 22 metals and aluminum on an annual basis. The Discharger can dispose of sludge by taking it to a landfill, by land application, or by incineration.

B. Discharge Points and Receiving Waters

- 1. The Facility is located in Section 11, T19N, R6E, MDB&M, as shown in Attachment B (Figure B-1), a part of this Order.
- 2. Filter backwash wastewater is discharged at Discharge Point 001 to the raw water storage reservoir at a point latitude 39°, 30', 54" N and longitude 121°, 16', 09" W.

- ORDER NO. R5-2007-0078 NPDES NO. CA0084824
- 3. Backwash wastewater and raw water are discharged at Discharge Point 002 to an unnamed tributary of New York Creek, a water of the United States, at a point latitude 39°, 30', 54" N and longitude 121°, 16', 07" W.
- 4. The Facility lies within the Yuba River Hydrologic Unit, Mildred Lake Hydrologic Subarea (No. 517.13), as depicted on an interagency hydrologic map provided by the Department of Water Resources in August 1986.

C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

Effluent limitations/Discharge Specifications contained in the existing Order for discharges from Discharge Point 002 (raw water storage reservoir outfall to unnamed tributary of New York Creek) and representative monitoring data from the term of the previous Order are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation				Monitoring Data (From July 02 to January 07)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge	
Settleable Solids	mL/L	0.1		0.2	0		0	
Chlorine Residual	mg/L			0.02			0.02	
рН	pH units			[6.0, 9.0] ¹			[6.72, 8.1] ¹	

¹Instantaneous minimum and maximum

D. Compliance Summary

The Discharger maintained compliance with the last Order. No effluent violations were recorded.

E. Planned Changes

Currently, there are no planned changes for the Facility.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the applicable plans, policies, and regulations identified in section II of the Limitations and Discharge Requirements (Findings). This section provides supplemental information, where appropriate, for the plans, policies, and regulations relevant to the discharge.

A. Legal Authority

See Limitations and Discharge Requirements - Findings, Section II.C.

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B. California Environmental Quality Act (CEQA)

See Limitations and Discharge Requirements - Findings, Section II.E.

C. State and Federal Regulations, Policies, and Plans

1. Water Quality Control Plans. The Regional Water Board adopted a Water Quality Control Plan, Fourth Edition (Revised September 2004), for the Sacramento and San Joaquin River Basins (Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, State Water Board Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan. The beneficial uses of the unnamed tributary to New York Creek (tributary to the Yuba River via Dry Creek) downstream of the discharge are municipal and domestic supply, agricultural irrigation, agricultural stock watering, industrial power, water contact recreation, other non-contact water recreation, warm freshwater aquatic habitat, cold freshwater aquatic habitat, warm fish migration habitat, cold fish migration habitat, warm spawning habitat, cold spawning habitat, and wildlife habitat.

The Basin Plan on page II-1.00 states: "Protection and enhancement of existing and potential beneficial uses are primary goals of water quality planning..." and with respect to disposal of wastewaters states that "...disposal of wastewaters is [not] a prohibited use of waters of the State; it is merely a use which cannot be satisfied to the detriment of beneficial uses."

The federal CWA section 101(a)(2), states: "it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife, and for recreation in and on the water be achieved by July 1, 1983." Federal Regulations, developed to implement the requirements of the CWA, create a rebuttable presumption that all waters be designated as fishable and swimmable. Federal Regulations, 40 CFR sections 131.2 and 131.10, require that all waters of the State regulated to protect the beneficial uses of public water supply, protection and propagation of fish, shell fish and wildlife, recreation in and on the water, agricultural, industrial and other purposes including navigation. Section 131.3(e), 40 CFR, defines existing beneficial uses as those uses actually attained after November 28, 1975, whether or not they are included in the water quality standards. Federal Regulation, 40 CFR section 131.10 requires that uses be obtained by implementing effluent limitations, requires that all downstream uses be protected and states that in no case shall a state adopt waste transport or waste assimilation as a beneficial use for any waters of the United States.

This Order contains Effluent Limitations requiring a level of treatment that is necessary to protect the beneficial uses of the receiving water. The Regional Water

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Board has considered the factors listed in CWC section 13241 in establishing these requirements, as discussed in more detail in the Fact Sheet, Attachment F, Section IV.

- 2. Thermal Plan Not Applicable.
- 3. Bay-Delta Plan Not Applicable.
- 4. Antidegradation Policy. Section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution No. 68-16. Resolution No. 68-16 incorporates the federal antidegradation policy where the federal policy applies under federal law. Resolution No. 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. As discussed in detail in the Fact Sheet (Attachment F, Section IV.D.4.) the discharge is consistent with the antidegradation provisions of 40 CFR section 131.12 and State Water Board Resolution 68-16.
- 5. Anti-Backsliding Requirements. Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at title 40, Code of Federal Regulations section 122.44(I) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. Compliance with the Anti-Backsliding requirements is discussed in Section IV.D.3.
- 6. Storm Water Requirements. USEPA promulgated Federal Regulations for storm water on 16 November 1990 in 40 CFR Parts 122, 123, and 124. The NPDES Industrial Storm Water Program regulates storm water discharges from wastewater treatment facilities. Water treatment plants are not applicable industries under the storm water program and are not obligated to seek coverage under the storm water program.
- 7. Endangered Species Act. This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

D. Impaired Water Bodies on CWA 303(d) List

 Under Section 303(d) of the 1972 Clean Water Act, states, territories and authorized tribes are required to develop lists of water quality limited segments. The waters on these lists do not meet water quality standards, even after point sources of pollution

have installed the minimum required levels of pollution control technology. On July 25, 2003 USEPA gave final approval to California's 2002 Section 303(d) List of Water Quality Limited Segments. The Basin Plan references this list of Water Quality Limited Segments (WQLSs), which are defined as "...those sections of lakes, streams, rivers or other fresh water bodies where water quality does not meet (or is not expected to meet) water quality standards even after the application of appropriate limitations for point sources (40 CFR 130, et seq.)." The Basin Plan also states, "Additional treatment beyond minimum federal standards will be imposed on dischargers to [WQLSs]. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment." The Yuba River (Englebright Dam to Feather River) is not listed as an impaired water body.

 Total Maximum Daily Loads. The US EPA requires the Regional Water Board to develop total maximum daily loads (TMDLs) for each 303(d) listed pollutant and water body combination.

E. Other Plans, Polices and Regulations

- 1. The discharge authorized herein and the treatment and storage facilities associated with the discharge of treated municipal wastewater, except for discharges of residual sludge and solid waste, are exempt from the requirements of Title 27, California Code of Regulations (CCR), section 20005 *et seq.* (hereafter Title 27). The exemption, pursuant to Title 27 CCR section 20090(a), is based on the following:
 - a. The waste consists primarily of treated water treatment plant filter backwash effluent;
 - The waste discharge requirements are consistent with water quality objectives;
 and
 - c. The treatment and storage facilities described herein are associated with a municipal wastewater treatment plant.
- 2. The State Water Board adopted the *Water Quality Control Policy for the Enclosed Bays and Estuaries of California*. The requirements within this Order are consistent with the Policy.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

Effluent limitations and toxic and pretreatment effluent standards established pursuant to Sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 304 (Information and Guidelines), and 307 (Toxic and Pretreatment Effluent Standards) of the Clean Water Act (CWA) and amendments thereto are applicable to the discharge.

The Federal CWA mandates the implementation of effluent limitations that are as stringent as necessary to meet water quality standards established pursuant to state or

federal law [33 U.S.C., § 1311(b)(1)(C); 40 CFR, § 122.44(d)(1)]. NPDES permits must incorporate discharge limits necessary to ensure that water quality standards are met. This requirement applies to narrative criteria as well as to criteria specifying maximum amounts of particular pollutants. Pursuant to Federal Regulations, 40 CFR Section 122.44(d)(1)(i), NPDES permits must contain limits that control all pollutants that "are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality." Federal Regulations, 40 CFR, §122.44(d)(1)(vi), further provide that "[w]here a state has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority must establish effluent limits."

The CWA requires point source discharges to control the amount of conventional, nonconventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations: 40 CFR §122.44(a) requires that permits include applicable technologybased limitations and standards, and 40 CFR §122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water where numeric water quality objectives have not been established. The Regional Water Board's Basin Plan, page IV-17.00, contains an implementation policy ("Policy for Application of Water Quality Objectives" that specifies that the Regional Water Board "will, on a case-by-case basis, adopt numerical limitations in orders which will implement the narrative objectives." This Policy complies with 40 CFR §122.44(d)(1). With respect to narrative objectives, the Regional Water Board must establish effluent limitations using one or more of three specified sources, including (1) EPA's published water quality criteria, (2) a proposed state criterion (i.e., water quality objective) or an explicit state policy interpreting its narrative water quality criteria (i.e., the Regional Water Board's "Policy for Application of Water Quality Objectives")(40 CFR 122.44(d)(1) (vi) (A), (B) or (C)), or (3) an indicator parameter. The Basin Plan contains a narrative objective requiring that: "All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life" (narrative toxicity objective). The Basin Plan requires the application of the most stringent objective necessary to ensure that surface water and groundwater do not contain chemical constituents, discoloration, toxic substances. radionuclides, or taste and odor producing substances that adversely affect beneficial uses. The Basin Plan states that material and relevant information, including numeric criteria, and recommendations from other agencies and scientific literature will be utilized in evaluating compliance with the narrative toxicity objective. The Basin Plan also limits chemical constituents in concentrations that adversely affect surface water beneficial uses. For waters designated as municipal, the Basin Plan specifies that, at a minimum, waters shall not contain concentrations of constituents that exceed Maximum Contaminant Levels (MCL) of CCR Title 22. The Basin Plan further states that, to protect all beneficial uses, the Regional Water Board may apply limits more stringent

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than MCLs.

A. Discharge Prohibitions

1. As stated in section I.G of Attachment D, Standard Provisions, this Order prohibits bypass from any portion of the treatment facility. Federal Regulations, 40 CFR 122.41 (m), define "bypass" as the intentional diversion of waste streams from any portion of a treatment facility. This section of the Federal Regulations, 40 CFR 122.41 (m)(4), prohibits bypass unless it is unavoidable to prevent loss of life, personal injury, or severe property damage. In considering the Regional Water Board's prohibition of bypasses, the State Water Board adopted a precedential decision, Order No. WQO 2002-0015, which cites the Federal Regulations, 40 CFR 122.41(m), as allowing bypass only for essential maintenance to assure efficient operation.

B. Technology-Based Effluent Limitations

1. Scope and Authority

The CWA requires that technology-based effluent limitations be established based on several levels of controls:

- Best practicable treatment control technology (BPT) represents the average of the best performance by plants within an industrial category or subcategory.
 BPT standards apply to toxic, conventional, and non-conventional pollutants.
- Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and nonconventional pollutants.
- Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering the "cost reasonableness" of the relationship between the cost of attaining a reduction in effluent discharge and the benefits that would result, and also the cost effectiveness of additional industrial treatment beyond BPT.
- New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires USEPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and section 125.3 of the Code of Federal Regulations authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories

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and/or pollutants of concern. Where BPJ is used, the permit writer must consider specific factors outlined in section 125.3.

2. Applicable Technology-Based Effluent Limitations

a. Total Suspended Solids (TSS) and Settleable Solids. For inland surface waters, the Basin Plan states, "[w]ater shall not contain substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses." Order No. R5-2002-0109 established effluent limitations for settleable solids which are TBELs for water treatment plants based on BPJ. This Order carries over the settleable solid TBELs established by Order No. R5-2002-0109. These effluent limitations reflect removal efficiencies for properly designed, constructed, and operated water treatment systems. Because the amount of settleable solids is measured in terms of volume per volume without a mass component, it is impracticable to calculate mass limitations for inclusion in this Order.

The Basin Plan includes water quality objectives that receiving waters not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses. This Order contains average monthly and maximum daily effluent limits for TSS of 30 and 50 mg/L, respectively. The Regional Water Board has determined that TSS are more likely to be resuspended than settleable solids in the wastewater settling ponds before discharge, and therefore, TSS concentrations are more likely to vary in the discharge than concentrations of settleable solids. To establish effluent limits for TSS, the Regional Water Board has examined several general permits, which regulate wastewater discharges form water treatment plants. A summary of these TSS limitations is presented in the table, below.

TSS Effluent Limitations for General Permits						
State	Average Monthly	Average Weekly	Maximum Daily			
Arkansas	20	No Limit	30			
California (Regional Water Board 2)	30	45	No Limit			
Massachusetts	30	No Limit	50			
New Hampshire	20	No Limit	50			
South Carolina	30	No Limit	60			
Washington ¹	No Limit	No Limit	No Limit			
West Virginia	30	No Limit	60			

¹Settleable solids, not TSS, is limited.

The Regional Water Board has also relied on research performed for the USEPA in 1987 (SAIC, Model Permit Package for the Water Supply Industry, EPA Contract No. 68-01-7043). This study found that 76 percent of water treatment plants surveyed used sedimentation lagoons for wastewater treatment. In these facilities, limitations of 30 mg/L and 45 mg/L were representative of the, then, current permitting practice for average monthly and maximum daily TSS

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limitations, respectively. Analysis of actual monitoring data from these facilities showed the 95th percent occurrence (monthly average) and 99th percent occurrence (maximum daily) levels of treatment to be 28.1 mg/L and 44.4 mg/L, respectively. The study recommended limitations of 30 mg/L and 45 mg/L as the monthly average and daily maximum TSS limitations for a model NPDES permit. Using BPJ, the Regional Water Board is establishing average monthly and maximum daily, TBELs for TSS of 30 and 50 mg/L, respectively.

b. **Flow.** This Order contains a monthly average discharge flow effluent limit of 0.070 mgd at Discharge 001.

Summary of Technology-based Effluent Limitations Discharge Point 001

Table F-3. Summary of Technology-based Effluent Limitations

	Units	Effluent Limitations					
Parameter		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Flow	mgd	0.070					
Settleable solids	mL/L	0.1		0.2			
Total suspended solids	mg/L	30		50			

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C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

As specified in section 122.44(d)(1)(i), permits are required to include WQBELs for pollutants (including toxicity) that are or may be discharged at levels that cause, have reasonable potential to cause, or contribute to an in-stream excursion above any state water quality standard. The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

- a. Receiving Water. The receiving water is an unnamed tributary of New York Creek, tributary to Dry Creek and the Yuba River (Englebright Dam to Feather River). The beneficial uses of the Yuba River downstream of the discharge are, agricultural irrigation, agricultural stock watering, industrial power, water contact recreation, canoeing and rafting recreation, other non-contact water recreation, warm freshwater aquatic habitat, cold freshwater aquatic habitat, warm fish migration habitat, cold fish migration habitat, warm spawning habitat, cold spawning habitat, and wildlife habitat. The Basin Plan does not designate municipal and domestic supply as existing or potential uses of the Yuba River (Englebright Dam to Feather River). However, based on Resolution No. 88-63, New York Creek and Dry Creek, which are tributaries of the Yuba River, do have municipal and domestic supply uses. Thus, the municipal and domestic supply use was included for the unnamed tributary to New York Creek.
- b. **Hardness.** While no effluent limitation for hardness is necessary in this Order, hardness is critical to the assessment of the need for, and the development of, effluent limitations for certain metals. The *California Toxics Rule*, at (c)(4), states the following:

"Application of metals criteria. (i) For purposes of calculating freshwater aquatic life criteria for metals from the equations in paragraph (b)(2) of this section, for waters with a hardness of 400 mg/L or less as calcium carbonate, the actual ambient hardness of the surface water <u>shall</u> be used in those equations." [emphasis added]

The State Water Board, in footnote 19 to Water Quality Order No. 2004-0013, stated: "We note that...the Regional Water Board...applied a variable hardness value whereby effluent limitations will vary depending on the actual, current hardness values in the receiving water. We recommend that the Regional Water Board establish either fixed or seasonal effluent limitations for metals, as provided in the SIP, rather than 'floating' effluent limitations."

Effluent limitations for the discharge must be set to protect the beneficial uses of the receiving water for all discharge conditions. In the absence of the option of including condition-dependent, "floating" effluent limitations that are reflective of actual conditions at the time of discharge, effluent limitations must be set using a reasonable worst-case condition in order to protect beneficial uses for all discharge conditions. For purposes of establishing water quality-based effluent limitations, a reported hardness value of 29 mg/L as CaCO₃ was used.

c. Assimilative Capacity/Mixing Zone - Not applicable.

3. Determining the Need for WQBELs

- a. CWA section 301 (b)(1) requires NPDES permits to include effluent limitations that achieve technology-based standards and any more stringent limitations necessary to meet water quality standards. Water quality standards include Regional Water Board Basin Plan beneficial uses and narrative and numeric water quality objectives, State Water Board-adopted standards, and federal standards, including the CTR and NTR. The Basin Plan includes numeric sitespecific water quality objectives and narrative objectives for toxicity, chemical constituents, and tastes and odors. The narrative toxicity objective states: "All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life." (Basin Plan at III-8.00.) With regards to the narrative chemical constituents objective, the Basin Plan states that waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses. At minimum. "...water designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCLs)" in Title 22 of CCR. The narrative tastes and odors objective states: "Water shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to domestic or municipal water supplies or to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses."
- b. Federal regulations require effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause, or contribute to an in-stream excursion above a narrative or numerical water quality standard. Based on information submitted as part of the application, in studies, and as directed by monitoring and reporting programs, the Regional Water Board finds that the discharge has a reasonable potential to cause or contribute to an in-stream excursion above a water quality standard for residual chlorine. Water quality-based effluent limitations (WQBELs) for this constituent are included in this Order.
- c. The Regional Water Board conducted the RPA in accordance with Section 1.3 of the SIP. Although the SIP applies directly to the control of CTR priority pollutants, the State Water Board has held that the Regional Water Board may

use the SIP as guidance for water quality-based toxics control.¹ The SIP states in the introduction "The goal of this Policy is to establish a standardized approach for permitting discharges of toxic pollutants to non-ocean surface waters in a manner that promotes statewide consistency." Therefore, in this Order the RPA procedures from the SIP were used to evaluate reasonable potential for both CTR and non-CTR constituents.

d. WQBELs were calculated in accordance with section 1.4 of the SIP, as described in Attachment F, Section IV.C.4.

Two CTR data sets were used when determining reasonable potential and establishing effluent limits. The Discharger conducted CTR sampling in 2002 and Regional Water Board staff conducted CTR sampling in 2007; the data is summarized in Table F-5.

e. **Aluminum.** The Discharger has not previously monitored aluminum. This permit requires the Discharger to monitor aluminum since an aluminum-based polymer is used at the Facility. If it is determined that the discharge has reasonable potential to cause or contribute to an exceedance of water quality standards, the permit will be reopened to establish effluent limitations.

USEPA developed National Recommended Ambient Water Quality Criteria for protection of freshwater aquatic life for aluminum. The recommended four-day average (chronic) and one-hour average (acute) criteria for aluminum are 87 ug/L and 750 ug/L, respectively, for waters with a pH of 6.5 to 9.0. USEPA recommends that the ambient criteria are protective of the aquatic beneficial uses of receiving waters in lieu of site-specific criteria.

In USEPA's Ambient Water Quality Criteria for Aluminum—1988 [EPA 440/5-86-008], USEPA states that "[a]cid-soluble aluminum...is probably the best measurement at the present..."; however, USEPA has not yet approved an acid-soluble test method for aluminum. Replacing the ICP/AES portion of the analytical procedure with ICP/MS would allow lower detection limits to be achieved. Based on USEPA's discussion of aluminum analytical methods, this Order allows the use of the alternate aluminum testing protocol described above to meet monitoring requirements.

f. Bis (2-ethylhexyl) phthalate. Bis (2-ethyl-hexyl) phthalate is used primarily as one of several plasticizers in polyvinyl chloride (PVC) resins for fabricating flexible vinyl products. According to the Consumer Product Safety Commission, USEPA, and the Food and Drug Administration, these PVC resins are used to manufacture many products, including soft squeeze toys, balls, raincoats, adhesives, polymeric coatings, components of paper and paperboard, defoaming agents, animal glue, surface lubricants, and other products that must stay flexible and noninjurious for the lifetime of their use. The State MCL for bis (2-ethylhexyl)

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¹ See, Order WQO 2001-16 (Napa) and Order WQO 2004-0013 (Yuba City)

phthalate is 4 ug/l and the USEPA MCL is 6 ug/l. The NTR criterion for human health protection for consumption of water and aquatic organisms is 1.8 ug/l and for consumption of aquatic organisms only is 5.9 ug/l.

Bis (2-ethylhexyl) phthalate has been repeatedly detected at facilities throughout the state, both in receiving waters and effluents. It is unlikely that it is actually present in the source water at detectable concentrations. When samples have been collected and processed with minimal plastics contact, the pollutant rarely has been detected. Use of glass sampling containers has been successful in reducing false positives. At the Facility, the pollutant was detected one time in the effluent in a 2002 sampling; therefore the data is particularly suspect because of its age and potential use of plastic sampling containers. The most recent sample that was obtained by Regional Board staff on 19 January 2006, in a glass bottle, bis (2-ethylhexyl) phthalate was not detected. This permit requires quarterly monitoring for bis (2-ethylhexyl) phthalate for the first year, after which Regional Water Board staff will determine whether or not reasonable potential exists. If no reasonable potential exists, the Discharger will not be required to continue monitoring bis (2-ethylhexyl) phthalate quarterly. If it is determined that the discharge has reasonable potential to cause or contribute to an exceedance of water quality standards, the permit will be reopened to establish effluent limitations.

g. Chlorine Residual. The Discharger uses chlorine for disinfection, which is extremely toxic to aquatic organisms. Due to the existing chlorine use and the potential for chlorine to be discharged, the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the Basin Plan's narrative toxicity objective.

The USEPA Technical Support Document for Water Quality-Based Toxics Control [EPA/505/2-90-001] contains statistical methods for converting chronic (four-day) and acute (one-hour) aquatic life criteria to average monthly and maximum daily effluent limitations based on the variability of the existing data and the expected frequency of monitoring. Average one-hour and four-day limitations for chlorine, based on these criteria, are included in this Order. The Discharger can immediately comply with these new effluent limitations for chlorine residual.

The Discharger is required to monitor residual chlorine twice a month at Discharge 002. The permit does not require continuous chlorine monitoring because the settling ponds provide a physical holding time before discharging to the raw water storage reservoir. The detention time allows residual chlorine to volatize and the settling ponds provide dilution. Also, discharge from Discharge 002 is sporadic, allowing for additional dilution in the raw water reservoir. Therefore, the grab sample monitoring frequency is appropriate for the purpose of monitoring compliance. The chlorine residual limitations required in this Order are protective of aquatic organisms in the undiluted discharge. If

compliance is maintained, the Regional Water Board does not anticipate residual chlorine impacts to benthic organisms.

h. Electrical Conductivity.

The secondary MCL for electrical conductivity is 900 umhos/cm as a recommended level, 1600 umhos/cm as an upper level, and 2200 umhos/cm as a short-term maximum. The agricultural water quality goal, that would apply the narrative chemical constituents objective, is 700 umhos/cm as a long-term average based on Water Quality for Agriculture, Food and Agriculture Organization of the United Nations—Irrigation and Drainage Paper No. 29, Rev. 1 (R.S. Ayers and D.W. Westcot, Rome, 1985). The 700 umhos/cm agricultural water quality goal is intended to prevent reduction in crop yield, i.e. a restriction on use of water, for salt-sensitive crops, such as beans, carrots, turnips, and strawberries. Most other crops can tolerate higher electrical conductivity concentrations without harm, however, as the salinity of the irrigation water increases, more crops are potentially harmed by the electrical conductivity, or extra measures must be taken by the farmer to minimize or eliminate any harmful impacts.

The Discharger monitored electrical conductivity in the raw water and effluent (Discharge 001) for a short duration at the request of Regional Water Board staff. Electrical conductivity was monitored once a week for four weeks during March and April 2007 because electrical conductivity was not previously monitored at the Facility. The raw water data had an average electrical conductivity of 50.1 umhos/cm, with a range from 48.1 umhos/cm to 51.6 umhos/cm for four samples. The effluent at Discharge 001 had an average electrical conductivity of 58.8 umhos/cm, with a range from 51.6 umhos/cm to 62.1 umhos/cm for four samples. One receiving water sample was taken from the unnamed tributary of New York Creek (RSW 002 in this permit); the electrical conductivity was 61.1 umhos/cm. Therefore, there is no reasonable potential for electrical conductivity. As a precautionary measure, the Discharger is required to monitor the influent and effluent (Discharge 001) twice a month for electrical conductivity. If the electrical conductivity monitoring indicates that the discharge has reasonable potential to cause or contribute to an exceedance of water quality standards, the permit will be reopened to establish effluent limitations.

- i. **pH.** The Basin Plan includes a water quality objective for surface waters (except for Goose Lake) that the "...pH shall not be depressed below 6.5 nor raised above 8.5. Changes in normal ambient pH levels shall not exceed 0.5 in fresh waters with designated COLD or WARM beneficial uses." Effluent Limitations for pH are included in this Order based on the Basin Plan objectives for pH.
- j. Salinity. The electrical conductivity of the effluent (average of 58.8 umhos/cm) was less than that of the receiving water of the unnamed tributary of New York Creek (61.1 umhos/cm). In addition, the Discharger does not add salt at the Facility; therefore, there is no reasonable potential for salinity.

Table F-4 Reasonable Potential Analysis for Effluent Constituents with Detectable Results

Parameter					WQO/	onstituents with Detectable Resul	
(units)	n¹	CV ²	MEC ³	B ⁴	WQC ⁵	Source	RP ⁶
Arsenic, Total Recoverable (ug/L)	2	0.6	0.2	1.4	10	USEPA Primary Maximum Contaminant Level	N
Chromium III, Total Recoverable (ug/L)	2	0.6	0.2	0.2	75.10	California Toxics Rule 4-day average	N
Copper, Total Recoverable (ug/L)	2	0.6	0.5	0.43	3.24	California Toxics Rule 4-day average	N
Mercury, Total Recoverable (ng/L)	2	0.6	0.66	1.32	50	California Toxics Rule Sources of Drinking Water	N
Nickel, Total Recoverable (ug/L)	2	0.6	1.8	1.1	18.30	California Toxics Rule 4-day average	N
Selenium, Total Recoverable (ug/L)	2	0.6	0.2	0.2	5	Freshwater Aquatic Life 4-day average	N
Zinc, Total Recoverable (ug/L)	2	0.6	3	5	41.98	California Toxics Rule 4-day/1-hour average	N
Chloroform (ug/L)	2	0.6	6.8	0.5	80	USEPA Primary Maximum Contaminant Level	N
Bis (2-ethylhexyl) phthalate (ug/L)	2	0.6	2	2	1.8	National Toxics Rule Sources of Drinking Water	l ⁷
Diethyl phthalate (ug/L)	2	0.6	2	1	23,000	California Toxics Rule Human Health Drinking Water Sources	N
di-n-butyl phthalate (ug/L)	2	0.6	0.92	0.8	2700	California Toxics Rule Human Health Drinking Water Sources	N
Chlorine, Total Residual (mg/L)	51	0.6	0.02	N/A	0.011/ 0.019	USEPA Recommended Criteria 4-day/1-hour Average	Υ
Electrical Conductivity @ 25°C (umhos/cm)	4/1	0.6	62.1	61.1	700	Water Quality for Agriculture Ayers and Westcot	N

¹ n: number of data points available.

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² CV: coefficient of variation.

³ MEC: maximum effluent concentration.

⁴ B: Background receiving water concentration. ND=non-detect, NA=not available.

⁵ WQO: water quality objective. WQC: water quality criteria.

⁶ RP: Reasonable potential. ⁷ Indeterminate

4. WQBEL Calculations

- a. No water quality based effluent limitations were calculated since reasonable potential only existed for residual chlorine. If reasonable potential exists for other constituents in the future, water quality based effluent limits will be calculated in accordance with section 1.4 of the SIP. The following paragraphs describe the methodology used for calculating effluent limitations.
- Effluent Limitation Calculations. In calculating maximum effluent limitations, the effluent concentration allowances were set equal to the criteria/standards/objectives.

$$ECA_{acute} = CMC$$
 $ECA_{chronic} = CCC$

For the human health, agriculture, or other long-term criterion/objective, a dilution credit can be applied. The ECA is calculated as follows:

$$ECA_{HH} = HH + D(HH - B)$$

where:

ECA_{acute} = effluent concentration allowance for acute (one-hour average) toxicity criterion

ECA_{chronic} = effluent concentration allowance for chronic (four-day average) toxicity criterion

ECA_{HH} = effluent concentration allowance for human health, agriculture, or other long-term criterion/objective

CMC = criteria maximum concentration (one-hour average)

CCC = criteria continuous concentration (four-day average, unless otherwise noted)

HH = human health, agriculture, or other long-term criterion/objective

D = dilution credit

B = maximum receiving water concentration

Acute and chronic toxicity ECAs were then converted to equivalent long-term averages (LTA) using statistical multipliers and the lowest is used. Additional statistical multipliers were then used to calculate the maximum daily effluent limitation (MDEL) and the average monthly effluent limitation (AMEL).

Human health ECAs are set equal to the AMEL and a statistical multiplier is used to calculate the MDEL.

$$AMEL = mult_{AMEL} \left[min \left(M_A ECA_{acute}, M_C ECA_{chronic} \right) \right]$$

$$MDEL = mult_{MDEL} \left[min \left(M_A ECA_{acute}, M_C ECA_{chronic} \right) \right]$$

$$LTA_{acute}$$

$$MDEL_{HH} = \left(\frac{mult_{MDEL}}{mult_{AMEL}} \right) AMEL_{HH}$$

$$LTA_{chronic}$$

where: mult_{AMEL} = statistical multiplier converting minimum LTA to AMEL

mult_{MDEL} = statistical multiplier converting minimum LTA to MDEL

M_A = statistical multiplier converting CMC to LTA M_C = statistical multiplier converting CCC to LTA

Summary of Water Quality-based Effluent Limitations Discharge Point 001

Table F-5. Summary of Water Quality-based Effluent Limitations

Parameter	Units	Effluent Limitations						
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum		
рН	standard units				6.0	9.0		

Summary of Water Quality-based Effluent Limitations Discharge Point 002

Total Residual Chlorine: Effluent total residual chlorine shall not exceed the following:

- i. 0.01 mg/L as a four-day average; and
- ii. 0.02 mg/L as a one-hour average.

5. Whole Effluent Toxicity (WET)

For compliance with the Basin Plan's narrative toxicity objective, this Order requires the Discharger to conduct whole effluent toxicity testing for acute and chronic toxicity, as specified in the Monitoring and Reporting Program (Attachment E, Section V.). This Order also contains effluent limitations for acute toxicity and requires the Discharger to implement best management practices to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity.

a. **Acute Aquatic Toxicity.** The Basin Plan states that "...effluent limits based upon acute biotoxicity tests of effluents will be prescribed where appropriate...". Effluent limitations for acute toxicity have been included in this Order.

b. Chronic Aquatic Toxicity. The Basin Plan contains a narrative toxicity objective that states, "All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life." (Basin Plan at III-8.00) Adequate WET data is not available to determine if the discharge has reasonable potential to cause or contribute to an in-stream excursion above of the Basin Plan's narrative toxicity objective. Attachment E of this Order requires once in permit lifecycle chronic WET monitoring for demonstration of compliance with the narrative toxicity objective.

D. Final Effluent Limitations

1. Mass-based Effluent Limitations.

Title 40 CFR 122.45(f)(1) requires effluent limitations be expressed in terms of mass, with some exceptions, and 40 CFR 122.45(f)(2) allows pollutants that are limited in terms of mass to additionally be limited in terms of other units of measurement. This Order includes effluent limitations expressed in terms of mass and concentration. In addition, pursuant to the exceptions to mass limitations provided in 40 CFR 122.45(f)(1), some effluent limitations are not expressed in terms of mass, such as pH and temperature, and when the applicable standards are expressed in terms of concentration (e.g. CTR criteria and MCLs) and mass limitations are not necessary to protect the beneficial uses of the receiving water.

2. Averaging Periods for Effluent Limitations.

This Order utilizes maximum daily effluent limitations in lieu of average weekly effluent limitations for settleable solids and total suspend solids as recommended by the TSD for the achievement of water quality standards and for the protection of the beneficial uses of the receiving stream. This Order utilizes four-day average and one-hour average effluent limitations for residual chlorine.

3. Satisfaction of Anti-Backsliding Requirements.

All effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order.

4. Satisfaction of Antidegradation Policy

This Order does not allow an increase in mass or flow from the previous permit. The permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Board Resolution 68-16. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge. The impact on existing water quality will be insignificant.

Summary of Final Effluent Limitations Discharge Point 001

Table F-6. Summary of Final Effluent Limitations

	Units	Effluent Limitations					
Parameter		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	Basis
Flow	mgd	0.070					TBEL ¹
Settleable Solids	mL/L-hr	0.1		0.2			TBEL ¹
Total Suspended Solids	mg/L	30		50			TBEL ¹
PH	standard units				6.0	9.0	WQBEL ²

¹Technology based effluent limitation

Summary of Final Effluent Limitations Discharge Point 002

- a. **Total Residual Chlorine**: Effluent total residual chlorine shall not exceed the following:
 - i. 0.01 mg/L as a four-day average; and
 - ii. 0.02 mg/L as a one-hour average.
- b. **Acute Toxicity**: Survival of aquatic organisms in 96-hour bioassays of undiluted waste shall be no less than:

Minimum for any one bioassay		70%
Median for any three or more cor	secutive bioassays	90%

- E. Interim Effluent Limitations Not Applicable
- F. Land Discharge Specifications Not Applicable
- G. Reclamation Specifications Not Applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

Basin Plan water quality objectives to protect the beneficial uses of surface water and groundwater include numeric objectives and narrative objectives, including objectives for chemical constituents, toxicity, and tastes and odors. The toxicity objective requires that surface water and groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, animals, or aquatic life. The chemical constituent objective requires that surface water and groundwater shall not contain chemical constituents in concentrations that adversely affect any beneficial use or that exceed the maximum contaminant levels (MCLs) in Title 22, CCR. The tastes and

Attachment F – Fact Sheet F-22

²Water quality-based effluent limitation

odors objective states that surface water and groundwater shall not contain taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses. The Basin Plan requires the application of the most stringent objective necessary to ensure that surface water and groundwater do not contain chemical constituents, toxic substances, radionuclides, or taste and odor producing substances in concentrations that adversely affect domestic drinking water supply, agricultural supply, or any other beneficial use.

A. Surface Water

1. CWA section 303(a-c), requires states to adopt water quality standards, including criteria where they are necessary to protect beneficial uses. The Regional Water Board adopted water quality criteria as water quality objectives in the Basin Plan. The Basin Plan states that "[t]he numerical and narrative water quality objectives define the least stringent standards that the Regional Board will apply to regional waters in order to protect the beneficial uses." The Basin Plan includes numeric and narrative water quality objectives for various beneficial uses and water bodies. This Order contains Receiving Surface Water Limitations based on the Basin Plan numerical and narrative water quality objectives for biostimulatory substances, chemical constituents, color, dissolved oxygen, floating material, oil and grease, pH, pesticides, radioactivity, sediment, settleable material, suspended material, tastes and odors, temperature, toxicity, and turbidity.

Numeric Basin Plan objectives for bacteria, dissolved oxygen, pH, temperature, and turbidity are applicable to this discharge and have been incorporated as Receiving Surface Water Limitations. Rational for these numeric receiving surface water limitations are as follows:

- a. *Bacteria. The Basin Plan includes a water quality objective that "[I]n water designated for contact recreation (REC-1), the fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed a geometric mean of 200/100 ml, nor shall more than ten percent of the total number of samples taken during any 30-day period exceed 400/100 ml." Numeric Receiving Water Limitations for bacteria are included in this Order and are based on the Basin Plan objective.
- b. *Biostimulatory Substances. The Basin Plan includes a water quality objective that "[W]ater shall not contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses." Receiving Water Limitations for biostimulatory substances are included in this Order and are based on the Basin Plan objective.
- c. *Color. The Basin Plan includes a water quality objective that "[W]ater shall be free of discoloration that causes nuisance or adversely affects beneficial uses." Receiving Water Limitations for color are included in this Order and are based on the Basin Plan objective.

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- d. *Chemical Constituents. The Basin Plan includes a water quality objective that "[W]aters shall not contain chemical constituents in concentrations that adversely affect beneficial uses." Receiving Water Limitations for chemical constituents are included in this Order and are based on the Basin Plan objective.
- e. *Dissolved Oxygen. The unnamed tributary of New York Creek by application of the tributary rule has been designated as having the beneficial use of cold freshwater aquatic habitat (COLD). For water bodies designated as having COLD as a beneficial use, the Basin Plan includes a water quality objective of maintaining a minimum of 7.0 mg/L of dissolved oxygen. Since the beneficial use of COLD does apply to the unnamed tributary of New York Creek a receiving water limitation of 7.0 mg/L for dissolved oxygen was included in this Order.

For surface water bodies outside of the Delta, the Basin Plan includes the water quality objective that "...the monthly median of the mean daily dissolved oxygen (DO) concentration shall not fall below 85 percent of saturation in the main water mass, and the 95 percentile concentration shall not fall below 75 percent of saturation." This objective was included as a receiving water limitation in this Order.

- f. *Floating Material. The Basin Plan includes a water quality objective that "[W]ater shall not contain floating material in amounts that cause nuisance or adversely affect beneficial uses." Receiving Water Limitations for floating material are included in this Order and are based on the Basin Plan objective.
- g. *Oil and Grease. The Basin Plan includes a water quality objective that "[W]aters shall not contain oils, greases, waxes, or other materials in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses." Receiving Water Limitations for oil and grease are included in this Order and are based on the Basin Plan objective.
- h. *pH. The Basin Plan includes water quality objective that "[T]he pH shall not be depressed below 6.5 nor raised above 8.5. Changes in normal ambient pH levels shall not exceed 0.5 in fresh waters with designated COLD or WARM beneficial uses". This Order includes receiving water limitations for both pH range and pH change.

The Basin Plan allows an appropriate averaging period for pH change in the receiving stream. Since there is no technical information available that indicates that aquatic organisms are adversely affected by shifts in pH within the 6.5 to 8.5 range, an averaging period is considered appropriate and a monthly averaging period for determining compliance with the 0.5 receiving water pH limitation is included in this Order.

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- i. *Pesticides. The Basin Plan includes a water quality objective for pesticides beginning on page III-6.00. Receiving Water Limitations for pesticides are included in this Order and are based on the Basin Plan objective.
- j. *Radioactivity. The Basin Plan includes a water quality objective that "[R]adionuclides shall not be present in concentrations that are harmful to human, plant, animal or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal or aquatic life." The Basin Plan states further that "[A]t a minimum, waters designated for use as domestic or municipal supply (MUN) shall not contain concentrations of radionuclides in excess of the maximum contaminant levels (MCLs) specified in Table 4 (MCL Radioactivity) of Section 64443 of Title 22 of the California Code of Regulations..." Receiving Water Limitations for radioactivity are included in this Order and are based on the Basin Plan objective.
- k. **Salinity** Not applicable since electrical conductivity is low in the receiving water and effluent and salt is not added at the Facility.
- 1. *Sediment. The Basin Plan includes a water quality objective that "[T]he suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses" Receiving Water Limitations for suspended sediments are included in this Order and are based on the Basin Plan objective.
- m. *Settleable Material. The Basin Plan includes a water quality objective that "[W]aters shall not contain substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses." Receiving Water Limitations for settleable material are included in this Order and are based on the Basin Plan objective.
- n. *Suspended Material. The Basin Plan includes a water quality objective that "[W]aters shall not contain suspended material in concentrations that cause nuisance or adversely affect beneficial uses." Receiving Water Limitations for suspended material are included in this Order and are based on the Basin Plan objective.
- o. *Taste and Odors. The Basin Plan includes a water quality objective that "[W]ater shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to domestic or municipal water supplies or to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses." Receiving Water Limitations for taste-or odor-producing substances are included in this Order and are based on the Basin Plan objective.
- p. *Temperature. The unnamed tributary of New York Creek by application of the tributary rule has the beneficial uses of both COLD and WARM. The Basin Plan

includes the objective that "[a]t no time or place shall the temperature of COLD or WARM intrastate waters be increased more than 5°F above natural receiving water temperature." This Order includes a receiving water limitation based on this objective.

- q. *Toxicity. The Basin Plan includes a water quality objective that "[A]II waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life." Receiving Water Limitations for toxicity are included in this Order and are based on the Basin Plan objective.
- r. *Turbidity. The Basin Plan includes a water quality objective that "[I]ncreases in turbidity attributable to controllable water quality factors shall not exceed the following limits:
 - Where natural turbidity is between 0 and 5 Nephelometric Turbidity Units (NTUs), increases shall not exceed 1 NTU.
 - Where natural turbidity is between 5 and 50 NTUs, increases shall not exceed 20 percent.
 - Where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTUs.
 - Where natural turbidity is greater than 100 NTUs, increases shall not exceed 10 percent."

A numeric Receiving Surface Water Limitation for turbidity is included in this Order and is based on the Basin Plan objective for turbidity.

B. Groundwater

- 1. The beneficial uses of the underlying ground water are municipal and domestic supply, industrial service supply, industrial process supply, and agricultural supply.
- 2. Basin Plan water quality objectives include narrative objectives for chemical constituents, tastes and odors, and toxicity of groundwater. The toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, animals, or aquatic life. The chemical constituent objective states groundwater shall not contain chemical constituents in concentrations that adversely affect any beneficial use. The tastes and odors objective prohibits taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses. The Basin Plan also establishes numerical water quality objectives for chemical constituents and radioactivity in groundwaters designated as municipal supply. These include, at a minimum, compliance with MCLs in Title 22 of the CCR. The bacteria objective prohibits coliform organisms at or above 2.2 MPN/100 mL. The Basin Plan requires the application of the most stringent objective necessary to ensure that waters do

not contain chemical constituents, toxic substances, radionuclides, taste- or odorproducing substances, or bacteria in concentrations that adversely affect municipal or domestic supply, agricultural supply, industrial supply or some other beneficial use.

Groundwater limitations are required to protect the beneficial uses of the underlying groundwater.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorizes the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP), Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

A. Influent Monitoring

 Influent monitoring is required to collect data on the characteristics of the raw water and to assess if the treatment processes at the Facility are contributing electrical conductivity to the wastewater.

B. Effluent Monitoring

1. Pursuant to the requirements of 40 CFR §122.44(i)(2) effluent monitoring is required for all constituents with effluent limitations. Effluent monitoring is necessary to assess compliance with effluent limitations, assess the effectiveness of the treatment process, and to assess the impacts of the discharge on the receiving stream and groundwater.

C. Whole Effluent Toxicity Testing Requirements

- 1. **Acute Toxicity.** Annual 96-hour bioassay testing is required to demonstrate compliance with the effluent limitation for acute toxicity.
- 2. **Chronic Toxicity.** Chronic whole effluent toxicity testing is required in order to demonstrate compliance with the Basin Plan's narrative toxicity objective.

D. Receiving Water Monitoring

1. Surface Water

 Receiving water monitoring is necessary to assess compliance with receiving water limitations and to assess the impacts of the discharge on the receiving stream.

2. Groundwater

a. This Order does not require the Discharger to conduct groundwater monitoring. There is no current evidence to indicate that operation of the settling ponds pose a threat to groundwater quality. If information becomes available indicating adverse groundwater impacts, a groundwater investigation and subsequent monitoring may be required.

E. Other Monitoring Requirements

1. Sludge Monitoring

This Order requires the Discharger to update and implement a Sludge Disposal Plan to assure proper handling and disposal of solids that are collected and/or generated at the Facility.

2. Low Threat Discharge Monitoring

In addition to regulating discharges of settled water treatment plant filter backwash, this Order also regulates the discharge of low threat wastewaters. Low threat wastewaters include well development water, construction dewatering, pump/well testing, pipeline/tank pressure testing, pipeline/tank flushing or dewatering, condensate discharges, unspecified water supply system discharges and other miscellaneous dewatering/low threat discharges. The Discharger must prepare and implement an acceptable Pollution Prevention and Monitoring and Reporting Program (PPMRP) in order to have permit coverage for low threat discharges under this Order.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with section 122.41, and additional conditions applicable to specified categories of permits in accordance with section 122.42, are provided in Attachment D. The discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42.

Section 122.41(a)(1) and (b) through (n) establish conditions that apply to all State-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) allows the state to omit or modify conditions to impose more stringent requirements. In accordance with section 123.25, this Order omits federal conditions that address enforcement authority specified in sections 122.41(j)(5) and (k)(2) because the enforcement authority under

the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

B. Special Provisions

1. Reopener Provisions

- a. **Pollution Prevention.** This reopener provision allows the Regional Board to require the Discharger to prepare a pollution prevention plan in the future in accordance with CWC section 13263.3(d)(3) if it is shown through monitoring that aluminum is a pollutant of concern. This reopener provision allows the Regional Board to reopen this Order for addition and/or modification of effluent limitations and requirements for aluminum based on a review of the pollution prevention plan.
- b. Whole Effluent Toxicity. This Order requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate effluent toxicity through a Toxicity Reduction Evaluation (TRE) in the event of a failed whole effluent toxicity test. This Order may be reopened to include a numeric chronic toxicity limitation, a new acute toxicity limitation, and/or a limitation for a specific toxicant identified in the TRE. Additionally, if a numeric chronic toxicity water quality objective is adopted by the State Water Board, this Order may be reopened to include a numeric chronic toxicity limitation based on that objective.
- c. Water Effects Ratio (WER) and Metal Translators. A default WER of 1.0 has been used in this Order for calculating CTR criteria for applicable priority pollutant inorganic constituents. In addition, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total recoverable when conducting the reasonable potential analysis. If the Discharger performs studies to determine site-specific WER and/or site-specific dissolved-to-total metal translators, this Order may be reopened to modify the effluent limitations for the applicable inorganic constituents.

2. Special Studies and Additional Monitoring Requirements

a. Chronic Whole Effluent Toxicity Requirements. The Basin Plan contains a narrative toxicity objective that states, "All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life." (Basin Plan at III-8.00.) WET data does not demonstrate reasonable potential to cause or contribute to an in-stream excursion above of the Basin Plan's narrative toxicity objective. Attachment E of this Order requires once in permit lifecycle chronic WET monitoring for demonstration of compliance with the narrative toxicity objective.

In addition to WET monitoring, this provision requires the Discharger to submit to the Regional Water Board a TRE Work Plan in the event of a failed chronic WET test.

Monitoring Trigger. A numeric toxicity monitoring trigger of > 1 TUc (where TUc = 100/NOEC) is applied in the provision, because this Order does not allow any dilution for the chronic condition. Therefore, a TRE is triggered when the effluent exhibits a pattern of toxicity at 100% effluent.

3. Best Management Practices and Pollution Prevention

- a. **Pollution Prevention Plan (PPP).** A PPP for aluminum may be required in the future per CWC section 13263.3(d)(1)(D). If a PPP is required, the PPP shall be developed in conformance with CWC section 13263.3(d)(3) as outlined in subsection b., below.
- b. **CWC section 13263.3(d)(3) Pollution Prevention Plans.** The pollution prevention plan shall, at minimum, meet the requirements outlined in CWC section 13263.3(d)(3). The minimum requirements for the pollution prevention plan include the following:
 - i. An estimate of all of the sources of a pollutant contributing, or potentially contributing, to the loadings of a pollutant in the treatment plant influent.
 - ii. An analysis of the methods that could be used to prevent the discharge of the pollutant into the Facility. The analysis also shall identify sources, or potential sources, not within the ability or authority of the Discharger to control, such as pollutants in the potable water supply, airborne pollutants, pharmaceuticals, or pesticides, and estimate the magnitude of those sources, to the extent feasible.
 - iii. An estimate of load reductions that may be attained through the methods identified in subparagraph ii.
 - iv. A plan for monitoring the results of the pollution prevention program.
 - v. A description of the tasks, cost, and time required to investigate and implement various elements in the pollution prevention plan.
 - vi. A statement of the Discharger's pollution prevention goals and strategies, including priorities for short-term and long-term action, and a description of the Discharger's intended pollution prevention activities for the immediate future.
 - vii. A description of the Discharger's existing pollution prevention programs.
 - viii. An analysis, to the extent feasible, of any adverse environmental impacts, including cross-media impacts or substitute chemicals that may result from the implementation of the pollution prevention program.

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- ix. An analysis, to the extent feasible, of the costs and benefits that may be incurred to implement the pollution prevention program.
- 4. Construction, Operation, and Maintenance Specifications Not Applicable
- 5. Special Provisions for Municipal Facilities (POTWs Only) Not Applicable
- 6. Other Special Provisions
 - a. The Discharger is responsible for all necessary steps to adequately maintain and operate its water treatment plant. This Order requires the Discharger to update and implement Sludge Disposal Plan to assure proper handling and disposal of solids that are collected and/or generated at the Facility.
 - b. Currently, the Discharger is obligated to seek authorization under the Regional Water Board Order No. 5-00-175, *General Order for Dewatering and Other Low Threat Discharges to Surface Waters*, prior to discharging non-backwash waters such as well development water, construction dewatering, pump/well testing, pipeline/tank pressure testing, pipeline/tank flushing or dewatering, condensate discharges, unspecified water supply system discharges, and other miscellaneous dewatering/low threat discharges. Requirements in this Order pertaining to such discharges are meant to authorize and regulate such low threat discharges so that the Discharger is no longer obligated to seek coverage under the General Permit.
 - c. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code, Sections 6735, 7835, and 7835.1. To demonstrate compliance with Title 16, CCR, Sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional(s) responsible for the work.
 - d. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition or limitation contained in this Order, this Order requires the Discharger to notify the Regional Water Board by telephone (530) 224-4845 (or to the Regional Water Board staff person assigned to the facility) within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Regional Water Board waives confirmation. The written notification shall include the information required by Federal Standard

Provision [40 CFR §122.41(I)(6)(i)].

e. Prior to making any change in the discharge point, place of use, or purpose of use of the wastewater, the Discharger must obtain approval of, or clearance from the State Water Board (Division of Water Rights).

In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office.

To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Regional Water Board and a statement. The statement shall comply with the signatory paragraph of Federal Standard Provision V.B.5 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the CWC. Transfer shall be approved or disapproved in writing by the Executive Officer.

7. Compliance Schedules – Not Applicable

VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, Central Valley Region (Regional Water Board) is considering the issuance of waste discharge requirements (WDR) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for Forbestown Water Treatment Plant. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDR. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Notification was provided through the following: Internet posting and physical posting at the Facility and the Post Office, if allowed.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDR. Comments must be submitted either in person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Regional Water Board, written comments should be received at the Regional Water Board offices by 5:00 p.m. on 8 June 2007.

C. Public Hearing

The Regional Water Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: June 21 or 22, 2007

Time: 8:30 am

Location: Regional Water Quality Control Board, Central Valley Region

11020 Sun Center Dr., Suite #200 Rancho Cordova, CA 95670

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, WDR, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our Web address is http://www.waterboards.ca.gov/rwqcb5/ where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Water Board regarding the final WDR. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

State Water Resources Control Board Office of Chief Counsel P.O. Box 100, 1001 I Street Sacramento, CA 95812-0100

E. Information and Copying

The Report of Waste Discharge (RWD), related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the Regional Water Board Redding Office located at 415 Knollcrest Drive, Suite 100, Redding, CA 96002 at any time between 8:30 a.m. and 4:30 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (530) 224-4845.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDR and NPDES permit should contact the Regional Water Board, reference this facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Jacqueline Matthews at (530) 224-3249.